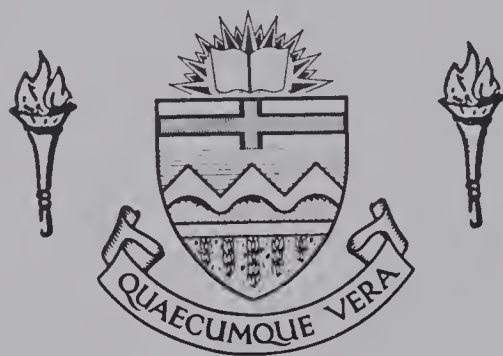


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SOCIAL CLASS BASED EDUCATIONAL DEFICIT AND THE
SOCIAL ENVIRONMENT OF THE SCHOOL

by



JOHN INGRAM

A THESIS

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The undersigned certify that they have read,
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the School" submitted by John Ingram in partial fulfill-
ment of the requirements for the degree of Master of
Education.

Abstract

This study aims at contributing towards an understanding of the phenomenon of social class based educational deficit. A great deal has of course been written on this subject and the writer has found it necessary to devote a considerable portion of the paper to a review of the literature, attempting to delimit and evaluate the major theoretical positions which have been influential in contemporary North American educational psychology. This task has been made difficult by the piece-meal empiricism of most of the investigations into "cultural deprivation". There has been little attempt on the part of educational researchers to analyse the reciprocal relations that exist between the macro-societal level functions of the education system and the character of micro-level social relations in the school. The theory of "sub cultural differentiation" advanced by the writer attempts to meet this shortcoming of contemporary educational research, as well as one other: namely, the neglect of the role of the social environment of the school in the ontogeny and perpetuation of class based educational deficit.

The social environment of the school, for purposes of empirical investigation, may be considered as a set of social relations of which the pupil-teacher relationship

is the most important component. In this study, projective techniques, sociometric measures and teacher ratings were used for a comparative analysis of the social environments of two Junior High Schools (concentrating on the Grade 7 level) that differed markedly in terms of pupils' class background. Partial support was found for the theory of sub cultural differentiation, although a much more extensive program of investigation would be required to test its validity than is attempted in this paper.

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Introduction

The aim of this study is to explore a somewhat neglected aspect of the problem of social class based educational achievement deficit (CBED): namely, the effect of social relations in the school, and its "working climate" upon pupil achievement.

The basic facts of CBED are well known to educators. In any large urban education system where the school population may be clearly differentiated in terms of class origins, children of the higher S.E.S. brackets invariably attain higher levels of educational achievement. The facts for Canadian society have been adequately documented by Porter (1965) although another study of national proportions is now required. A great deal of research in recent years has focused upon the more extreme forms of educational deficit at the lowest levels of the class structure. Due to this concentration upon "the disadvantaged child" there has perhaps been a tendency to forget the fact that educational deficit is a continuous phenomenon, not exclusively confined to a particular minority sector of the population. Nor of course is educational deficit entirely a class based phenomenon.

Viewed longitudinally, CBED is cumulative (Deutsch

et al, 1966). This seems also to have given only passing attention by many of the explanations offered in the literature. For a comprehensive understanding of the problem sociological, economic and psychological factors must be considered.

This study does not lay claims to comprehensiveness. It does not gather the data necessary to measure the extent of CBED in the Edmonton Public School System. Two schools have been chosen from within the E.P.S.S. which are of markedly contrasting social class background, although they do not represent extremes of the socioeconomic continuum. Projective and other techniques are used in a comparative study of the social relations of the climates of the two schools, in conjunction with an attempt to link the nature of school achievement motivation and working relations within the school to the necessary societal functions of the education system, given a prevailing set of productive relations and a particular value system in society at large. The broad intent of this line of reasoning is to demonstrate that CBED is an intrinsic property of the way in which the productive forces of society are organized. Empirical data presented in the paper fall far short of this demonstration, but do point to the inadequacy of some popular contemporary approaches to understanding the educational deficit of the lower class or "under privileged" child.

The justification for the paper does not rest wholly upon its possible "theoretical" contribution. While the writer believes there is a basic similarity between the major social problems of education, throughout the North American Continent--even those of all "advanced western societies"--considerable regional differences exist which make the results of research in one area possibly inapplicable in another. The subject of class differences in Edmonton schools has not been given close study. This paper constitutes a step in that direction.

The first three chapters are devoted to a review of major research trends and findings in the area leading to a statement of the writer's position in Chapter 4. Succeeding chapters describe the data that were gathered in the investigation, the results, and possible direction for further research.

PART I

CHAPTER 1

Genetic Factors and CBED

No serious discussion of CBED can avoid dealing with the old and difficult question of heredity and environment. A great deal has been written on the problem but much of the discussion rests upon insufficient methodological sophistication and tends to be shaped by the writers' philosophical presuppositions. Even when it has been decided what data are relevant and what means are most relevant in determining the relative importance of the two sets of factors, the sociological implications and the practical significance of the findings can be highly elusive.

The view that discrepancies in educational achievement across social class are the unavoidable product of individual differences and an assortative mechanism in society that grades people according to some genetic substratum of educability, has been traditionally unpopular with sociologists and educators. Eckland (1967), and Jensen (1969) claim that a blind eye has been turned to evidence of the heritability of intelligence in North

America, with social scientists preferring to assume a high degree of genetic homogeneity and see individual differences primarily as the result of environmental influences.

From a review of the major recent literature, it is possible to estimate with a useful degree of accuracy, the proportion of phenotypical variability in intelligence test scores that can be attributed to genotypical sources, given certain characteristics of the test population. It is well known that IQ tests yield moderately high predictions of academic achievement in a population that is heterogeneous with respect to ability, and that there is a consistent association between IQ and SES. It is also well known but quite often disputed that the greater portion of the variability on standard IQ tests such as the Binet or the Otis, for Caucasian schoolchildren seems attributable to genetic factors.

The concept of heritability requires more careful definition before the methods used for measuring it and the results that have been obtained can be discussed. As a first approximation, the variability of a trait measure for a particular population, its phenotypical variability (V_p) may be divided into a component attributable to genetic factors (V_h) and another to environmental influences (V_e). This is of course an oversimplification.

V_h may be subdivided for conceptual clarity into

several sub components. Firstly there are the additive gene effects (V_g) that account for the degree of likeness between parents and their offspring when all other genetic factors are excluded. This is the source of variability geneticists are most concerned with estimating, for it determines how responsive a particular trait will be to selective breeding. Where V_g is strong compared with all other sources of trait variance the effect of selective mating upon the population is strong. Jensen (1969) regards assortative mating as itself a component of V_h . It is of great interest to the problem of CBED because, "IQ . . . shows a greater degree of assortative mating in our society than any other measurable human characteristic [p. 8]." This may be an exaggeration but the IQ correlation between spouses is considerable ($X_r \approx .60$). Assortative mating will have the effect of lowering within-family trait differences and increasing the between-family differences.

The other two theoretical components of V_h , dominance deviation variance (V_d) and epistasis (V_i) are relevant for the problem of CBED only in so far as the proportion they collectively contribute to the phenotypic variability of the trait mitigates the influence of V_g and assortative mating. Direct evidence for the importance of V_g and assortative mating effects may be gained from twin studies. Indirect evidence, from the measurement of traits seemingly comparable with human in-

telligence, in infrahuman species such as that from the selective breeding of "maze bright" and "maze dull" rat strains, is too ambiguous to be of much value.

The heritability of a given trait (h^2) is conventionally defined in the following manner:

$$h^2 = \frac{V_g}{V_p} \quad \text{where } V_p = \text{the phenotypical variability of the trait.}$$

The overall environmental component (V_e) may be subdivided in many different ways and includes a great variety of distinct sources of variability, of which psycho-social variables constitute just one class. Jensen (1969) includes under V_e the heredity-environment interaction component (the tendency of different genotypes or levels of the trait which are due to inheritance, to interact differentially with respect to environmental factors). He is careful to distinguish between possible interaction effects and the effect of covariance of heredity and environment. Covariance may be seen to operate in a variety of ways--in the tendency of children of superior genetic endowment to be born into educationally more stimulating environments--or, as in the present study, the tendency for the more intelligent child to find himself more favourably situated for learning in the social environment of the school, than the less intelligent one.

In order to determine the contribution of these different sources of variance--in particular the additive genetic effect--to the total phenotypical variability of intelligence test scores, it is necessary to obtain suitable samples of subjects in preselected combinations of familial relationship for testing. On the basis of well established genetic theory, sources of variability are postulated for chosen comparisons and may be analyzed with the aid of the analysis of variance technique. Heritability estimates may be derived from more than one set of comparisons and the results matched for mutual agreement. The results yielded by this method have been generally consistent indicating that between 60 and 80 percent of the phenotypical variability in IQ test scores is attributable to a genetic substratum (the bulk of which is additive genetic variance). (see Burt, 1966, 1967; Huntley, 1965; Jensen, 1969)

Heritability estimates should be interpreted with caution. To quote the geneticist Falconer (1960):

"It is important to realize that the hereditability is a property not only of a character but also of the population and of the environmental circumstances to which the individuals are subjected. Since the value of the hereditability depends on the magnitude of all the components of variance, a change in any one of these will affect it. All the genetic components are influenced by gene frequencies and may therefore differ from one population to another, according to the past history of the population [p. 165]."

For this reason, heritability estimates reported in the

literature should be explicitly limited to the Causasian population, living under conditions associated with modern western society. Even this may be too gross a delimitation, but the high degree of agreement between British and North American findings suggests that it is a safe enough generalization.

The IQ test is an artifact of technological society, not just in the trivial sense that the test is man made, but the criteria against which it is validated are man made also. This element of historical and cultural relativity, which is not to be found in the measurement of physical traits, is only partially conveyed by the notion of "culture fairness," which contains the unjustified assumption that intelligence can be measured apart from the culture in which it is found. A glance at the history of mental testing shows how intimately the construction of intelligence tests is connected, through the education system, to the culture of society and the productive skills required by the economy. Traditional IQ tests have proven their utility for differentiating individuals on attributes that are socially valued. This ability is the foundation for their continued popularity. A certain arbitrariness in the IQ measure becomes apparent when one adopts a cross-cultural frame of reference, where our socially defined "abstract intelligence" can be seen as just one facet of a whole range of possible ex-

pressions of human intellect. Conditions of test administration model features that are peculiar to our system of education, and depend upon the possession of skills fostered by school education (MacArthur, 1969; Vernon, 1965). The amounts of formal education, controlling for age, ethnic origin, and possible cultural or subcultural differences, significantly affects measured IQ (Schmidt, 1960).

Of course nothing in the above paragraph is in contradiction with the finding of a high heritability coefficient, but does affect its interpretation. Heritability estimates are meaningful only within a certain range of the spectrum of cultural variability and should not be generalized to preliterate cultures, or groups within our society that have been denied equality of educational opportunity, and excluded from identification with the dominant culture.

High heritability should not be seen in opposition to the idea of trait modifiability. Although the variability of a given trait may be almost completely controlled by heredity, its expression in terms of measures of central tendency for the population may be greatly influenced by environmental factors. Some of Jensen's critics (e.g., Mc V.Hunt, 1969) apparently fail to make this distinction between factors underlying variability and those that influence measures of central tendency. In practical terms, the level of educational achievement

is in all probability rising, but relative discrepancies between social classes still remain more or less constant.

Mention has already been made of the role of the education system in assortative mating and the potential importance of the latter in promoting genotypical differences between social classes. This trend, as Crow (1969) notes, can only be reinforced by efforts to provide general equality of educational opportunity. The motivating force for this kind of educational reform may arise from the social imperative of raising the productive skills of the population to meet the requirements of an increasingly sophisticated means of production, rather than from an upsurge of social conscience on the part of government or the educational establishment. Halsey (1958) argues that there has been insufficient time for this process of genetic shift to significantly affect the population of Britain since the breakdown of the old social order which he describes as caste rather than a class system. Halsey's estimations rest upon a rather flimsy model, but they bring one to an awareness of the tremendous complexity of the problem, which requires an understanding of both theory and method in quantitative genetics and a knowledge of the historical development of the population.

In summary, one of the most important points to bear in mind when interpreting a heritability coefficient seems to be the comparability of the population on

which it was determined with the one to which one wishes to extrapolate. There seems to be between Caucasian groups living in the advanced industrial sector, a high degree of agreement on the hereditability estimates drawn from various independent samples, although extremes of the SES are probably not well represented in the genetic studies. The genetic component in class based differences in IQ and educational achievement for a population of schoolchildren such as the one found in the EPSS is in all likelihood significant, probably increasing, and possibly the major source of variance.

Intelligence is probably the most useful and coveted of human attributes in our society. Social benefits accrue to those thought to possess it and inferior status is conferred upon those who do not. This is ~~not~~ apparent in the social organization of the school. To anticipate one of the results of the present study, low achieving students (those in the bottom quartile of their class) tend to see themselves as negatively perceived by teachers, as "a dumb kid." Environmental influences probably act in such a way as to accentuate whatever differences exist in terms of genetic endowment. On the sociological plane, the identifying characteristics of class membership may well prejudice the informal assessment of an individual's ability, which is a continuous process during his educational ^{career} system. This theme will be elaborated upon in

greater detail in chapter five. The following chapters review some of the major environmentalist theories and research into CBED.

CHAPTER 2

The Theory of Language Deficit

Language skills form a large component--probably the major one of CBED. Reading comprehension and written expression form the foundation of the basic educational curriculum and these skills are closely allied to those of speech production and comprehension. It is not surprising then that various forms of the theory of language deficit have gained popularity with educators and educational psychologists. As a first approximation to the theory it may be useful to attempt to state common tenets on which all who subscribe to one or another of its different forms agree.

Language development is seen as a precondition, and a limiting factor, for educational development. The lower class (L.C.) child, because his spoken language differs more than that of the middle class (M.C.) child from standard English or because of differences in his linguistic environment, is thought to be handicapped for educational achievement.

Before looking more closely at this theory of CBED and evaluating its practical implications it is advisable to summarize some of the major known facts about

differential language development and social class. Surprisingly, hard facts are difficult to obtain in this area, largely because, in assessing linguistic development, it is very difficult to avoid using standard English as a reference point, thus biasing one's measure in the same way that traditional IQ tests unduly favour the MC child. Cazden (1966) has discussed this problem at some length, and the allied difficulty of constructing an adequate scale on syntactic complexity is mentioned below. However, it is clear that language development may be characterized most importantly by an ordered sequential growth of syntactic structures of increasing complexity that are apparent in the child's natural speech productions. Structural growth of this kind is most readily observable over the preschool period when the rate of language acquisition and the growth of linguistic competence, as it is usually defined, is greatest. It is not nearly as observable after this period, when the phenomenon of cumulative educational deficit becomes apparent. This may be taken as evidence damaging to the hypothesis of language deficit, or it could simply mean that our measures of structural complexity are insufficient. According to those who are engaged in describing the ontogeny of syntactic structures (Braine, 1963; Brown, 1964, 1968; Brown and Bellugi, 1964) and generative linguists, almost all structural development is completed by the age of five

years. However, this is a matter of interpretation rather than fact, so will be raised in more detail later.

Complexity of sentence structure and the degree of linguistic maturity are not synonymous, but sufficiently alike to have been measured in the past by the same variable--mean length of utterance (in words or morphemes). This is an unsatisfactory instrument because long utterances can be mechanically produced by stringing simple sentences together with common connectives. Fries (1952) found that while the mean lengths of utterances in standard and vulgar English were practically identical, the modal lengths differed considerably due to the disproportionately high percentage of very long utterances in vulgar English. Bernstein (1962) found no significant difference between the mean utterance length of speech transcripts of British LC and MC school children.

Entwisle (1968), using Erwin's (1961) finding that a correlation exists between the prevalence of paradigmatic associations and the grammatical competence of the child, reports on differential linguistic development for children in first, third and fifth grade on several demographic variables--social class, race, urbanization, and region locality. Among her findings were the lack of significant differences (controlling for IQ) between white MC children and the children of white blue collar workers. Grade one differences between white suburban and black

ghetto children were not significant, although by grade three the familiar deficit had appeared. White ghetto children showed initial superiority over their MC counterparts. Entwisle attributed this shortlived acceleration to the greater amount of time young LC children spend watching television (Ailyn, 1959).

Since syntactic complexity has been reported in the literature as an important criterion of language development, a measure of syntactic complexity (see Appendix 5) was also used in this study. Many writers have commented on the qualitative differences in the structure of spoken language between standard English and LC dialect.

The syntactic aspect of differential language development is important but semantic, lexical and phonological differences should be considered also. The semantic systems of LC and MC language may differ significantly, especially where there is considerable sub-cultural differentiation. Becker (1952) illustrates how this can inhibit teacher-pupil understanding in the classroom. Semantic considerations lead one beyond the realm of language deficit into the area of world views, attitudes and values--aspects that must be considered separately.

Lexical differences, more particularly in the size of the functional vocabulary, between MC and LC children

are almost too familiar to warrant mentioning except that they are too significant to overlook. Earlier phonological development in MC children was found by Irwin (1948), but while this contributes to the global picture of relatively slower language development in LC children it does not seem to be a fact of much independent importance.

In summary, the facts of differential language development must be interpreted in relation to dialectical differences associated with social class. Their meaning will depend upon the interpretation one places upon deviations from standard English. Generative linguists tend to regard such within language differences as of minimal importance. Lenneberg (1967), presumably following Chomsky, places them loosely in the category of surface structural variation. As such they may be subject to, or the product of, environmental influences, but are hardly considered important for intellectual development.

Language may be differently perceived in terms of different fields of discourse, and unless this is recognized it can lead to a good deal of useless polemic. Lenneberg, considering human language as a species characteristic, is probably correct to see it as an all or nothing genetically given capacity, the emergence of which is not dependent, except in a gross way, upon environmental influences, and one that is essentially independent of intellectual endowment as it is generally measured. Consis-

tent with his biogenic approach, Lenneberg employs a threshold model to conceptualize the effect of environment upon the growth of language. But, by language, he means the "latent structure" hypothesized by Chomsky to be common to all natural languages; the subject matter of an esoteric, universal theory of language. When one's focus of attention is not only restricted to within species variation, but upon variations in speech patterns within a social system, the unimportant elements of "superficial" structure, that are relatively much more controlled by environmental factors, assume a different significance. Because of their correlation with measured IQ and educational achievement they are important.

Theories of Language Deficit

The question naturally arising at this point is, more precisely, what meanings have the various theorists of language deficit ascribed to LC dialectical variations from standard English, and what are the environmental factors thought to produce "language deficit"? It becomes apparent that the label "language deficit" can be quite misleading. Language is shaped by the social relationships within which it is employed and these social relationships arise from the nature of the class system. It is the writer's opinion that language is instrumental in the maintenance of class differences but is not the basic

causative factor, as suggested by the phrase "language deficit." However this is to anticipate the conclusion of the train of argument.

Bernstein (1959, 1960, 1962) has made the major theoretical contribution to the sociolinguistics of educational deficit. His postulation of two contrasting spoken language codes has had a good deal of influence on other writers. The term "speech code" is no more precisely defined than "dialect," but the two are not quite the same. Dialects, and other subsystems of communication, may be placed along a continuum ranging from a completely restricted code in which each successive element in a communication sequence is totally predictable, to one whose form is quite unpredictable. Elaboration does not imply lack of organization, but rather, organization of such complexity as to permit an almost infinite formal variety and situational flexibility. The characteristics of communication in a restricted code dialect are adequately outlined by Bernstein (1964). His theoretical contribution lies in detailing the mutually reinforcing relationships between social role relationships and the language forms employed by those engaged in such relationships. Language forms are tailored to performing certain functions. The restricted code is characterized by specialization of function. It is a language of implicit meanings, uncongenial for expressing individualized experiences, but reinforcing

of group values. Bernstein argues that the psycho-social characteristics generally associated with LC personality and behaviour such as authoritarianism, an impulsive rather than reflective cognitive style, a collective rather than an individualistic social value orientation, etc., are reinforced--or shaped--throughout the whole period of psychological development by the language code of the LC speech community.

It is apparent that Bernstein's theory constitutes a form, albeit a weak form, of the theory of linguistic relativity; the Whorfian hypothesis. His position is validly represented by the following quotation:

"Language marks out what is relevant, affectively, cognitively and socially, and experience is transformed by that which is made relevant [Language, Culture and Society, 1964, p. 254]."

While this position holds considerable attraction, it is difficult to conceive how a conclusive test could be made of its validity. Indeed, evidence for the existence of two distinct codes in MC and LC speech is ambiguous. Cazden (1966) aptly notes that the only experimental verification Bernstein offers for this two code differentiation-hesitation phenomena in a taped transcript of LC and MC (schoolchildren's speech)-is marred by possible practice effects for the LC group.

Hess and Shipman (1965) have used Bernstein's two code theory in the analysis of speech patterns of mothers

from four different levels of SES. The mothers were making up a story for their children and assisting them in a problem solving task. MC mothers were found to be more verbally productive and to employ more complex sentence structures and less familiar verbal, adverbial and adjectival forms than LC mothers. They were less overtly directive in assisting the child on the problem solving task, offering more descriptive and interrogative type statements. Hess and Shipman have given a more strongly developmental interpretation to speech environmental differences than Bernstein who tends to stress the emotional and attitudinal implications of conflicting codes in the LC school when speaking of intellectual development. Hess and Shipman regard the mother-child communication system during infancy as especially important for later conceptual development. The quality of a mother's verbal responses to a child's questions and behaviour, the kind of language she uses with him, are considered important in the fostering of a question formulating attitude, a propensity to verbalize experience and to form "verbal mediation" systems, or in other terms, a system of symbolic representation. While the Hess and Shipman data are suggestive of this kind of interpretation, alternative hypotheses are by no means excluded.

Infancy is a period of rapid intellectual and linguistic maturation. Its importance is further magnified

by the concept of "school readiness" and the reasonable assumption that a child who begins poorly runs the risk of getting caught up in a vicious cycle of failure. However, there is no evidence to support the view that the mother-child interaction determines once and for all the later educational development of the child.

The investigation of Hess and Shipman points to the fact mentioned earlier that linguistic data must be considered in relation to other--para-linguistic--aspects of the communication process. Schmidt (1969) having cited Hore's (1968) and Brady's (1969) findings with respect to the incidence of mutual glances in mother-child interaction across SES and within the same social class concludes that:

"These results it seems to me, are clear indications once more, of the importance of studying the child-in-relation-to the- adult, if we are to understand the child's cognitive development . . ."

This kind of approach--wholistic rather than factor analytic, prompts two questions of fundamental interest for the problems of CBED. What are the characteristics of a growth stimulating parent child relationship? And, why is it that such growth stimulating relationships tend to be differentially distributed across social class in our society?

The paucity of verbal interaction in the LC home has been known for a long time (Milner 1951). It is

not difficult to speculate upon the effects of long term exposure to the more varied and complex language patterns that are typically found in the MC home. However, to experimentally separate the effects of linguistic factors from all other potential determinants of CBED in the home environment, is another matter. For example, emotional warmth will express itself in a higher amount of verbal exchange. Hence language and affect will be inextricably "confounded" in their effects upon the dependent variable. But one can question whether it makes sense to conceptualize them as independent variables. The study of CBED is plagued by piecemeal empirical studies that have led to piecemeal attempts at compensatory education and obscured the broader sociological factors arising from the nature of the social system.

Basic Research in Language and Cognitive Development

The study of the language acquisition process is obviously too broad a field to be covered adequately here, but it does have a bearing upon the theory of language deficit. Too little is known of the process of language acquisition in infancy to be able to identify those elements of adult speech models to which the child is most responsive. In fact the perennial debate between nativist and empiricist views over the importance of the language environment or the role of reinforcement, can be seen in the writings of the generative linguistically orientated

"psycho-linguists" on one hand and the neobehaviourist, verbal learning theorists on the other, although the lines of demarcation are becoming increasingly difficult to draw. By way of illustration of the primitive state of current knowledge one could cite the phenomenon of "expansions" of child speech--the mother's tendency to expand her infant's "telegraphic" utterances so that they meet the criterion of minimally grammatically meaningful sentences--which was discovered by Brown (1964). It is quite possible that LC mothers will be less conscientious in this practice than MC mothers who can only resist it with difficulty. Thus it might appear that we have an important feedback mechanism operating in the linguistic environment of the MC child which is absent from that of the LC child and which could conceivably account for some of the class based differential language development. However, a study by Cazden (1965) of the effect of expansions on the speech of pre-school children yielded negative results--the control group actually gave signs of accelerated language development.

There is considerable controversy amongst developmental psychologists over the importance to be assigned to language in intellectual development. Piaget in a recent interview (1970), stressed the negative potential of verbal formulae to actually inhibit operational understanding. The weight of evidence however indicates that some

medium of symbolic representation is an essential precondition for abstract thinking, and that such a vehicle is provided by natural language. Evidence for such a proposition must be drawn from a variety of sources--from the study of cognitive processes in profoundly deaf children, (Furth, 1966) the study of problem solving and learning behaviour of infants before, during and after language onset (such as the reversal shift phenomenon) (Kendler, 1963), the investigation of intellectual impairment associated with certain kinds of aphasia (Lenneberg, 1967). The general methodological obstacle facing the investigator is that language and cognition are so intimately connected in the developmental process that it is normally not possible to set up the kind of experimental comparisons one would like to draw.

Practical understanding is limited by the degree of advancement of basic research. This becomes apparent in attempting to evaluate the syntactic structure of LC and MC children's speech from TAT protocols. The writer found it very hard to operationalize Bernstein's two code concept. The scale finally arrived at is by no means a unique solution. Like those of other researchers (Hess et al 1965), it contains a large element of arbitrariness and it is difficult to evaluate the significance of the "syntactic" differences thus obtained--eg., Do they merely represent superficial stylistic deviations from "correctly"

spoken English, which are of little or no educational significance, or do they point to a lack of ideational fluency, a facility with verbal constructs that are critically important to determining one's level of educational attainment? Two basic sets of relationships need to be clarified in order to answer this question--firstly, the major problem that has increasingly come to occupy modern linguistics (Chomsky, 1965), that of the relationship between syntactic structure and semantics, and secondly, the relationship of syntax to style. For example, assuming that syntax is crucial for a unique determination of the meaning of an utterance, and that style is relatively unimportant, contributing only to the "color" of an utterance or the identity of the speaker and the social dimensions of the interaction, then how does one distinguish elements of style from those of syntax in a given speech transcript? Still assuming the validity of the syntax-style distinctions, where on the spectrum is one to place Bernstein's concept of two speech codes?

Summary

There appear to be three major ways in which language deficit can be significantly understood, the ways in which dialectical differences in habitual language usage could promote CBED.

Firstly, where the pupil's dialect is significantly deviant from the instructional language, usually standard English, there will tend to be a simple breakdown of class-

room communication and this will produce educational problems akin to second language learning. Where the speaker's language form is unfamiliar, there is less redundancy from the point of view of the listener, who is obliged to concentrate much harder for a given amount of information.

The second alternative, theoretically more interesting but correspondingly more difficult to demonstrate, is that LC dialect fails to provide the optimal tools for cognitive growth; that it fails to utilize the full potentials of the language. A distinction similar to Saussure's famous dichotomy between "la parole" and "la langue," between language as empirical corpus of speech utterances, and language as a system composed of different sub-systems, the syntactic, the semantic and the phonological, is useful here. Does a dialect have independent existence in the second sense? Or is it best conceived in the first sense? I.e., as a set of utterances generated by the major rules that constitute "la langue" but not all of them, or not certain combinations of them. In other words LC dialect could be conceived as a set of utterances generated by a partial, discriminating, application of "la langue," in such a way that its full potential to uniquely specify meaning has not been exploited[?]. In this way one can avoid the scarcely defensible position that one dialect is inherently superior to another, whilst still maintaining a form of the language deficit hypothesis. I have

tried to argue that insofar as the speech habits of a social class, friendship group, or mother-child retard the intellectual and educational development of an individual, they are indicative of well established social roles (roles of subordination). Language deficit thus calls, not for an attempt to remedy deficiencies in certain linguistic skills, (though this will be a corollary of any successful remedial program), but for a change in role relationships.

Thirdly, "language deficit" may be conceived sociologically. For a particular language different levels of formality can be readily distinguished by native speakers, even in pre-literate society (see Bloomfield in Hymes, 1964). Level of education, class origins and membership can generally be inferred from a person's speech. Language is an important clue to group membership. The habitual usages of a dialect and the stereotypes associated with it will tend to mould the social identity of the speaker. Dialect, perhaps more so than skin colour, provides a medium for social differentiation. Where dialect boundaries correspond with the existence of a sub-culture whose values are ambivalent or hostile to those of the dominant culture, spoken language may serve to magnify or perpetuate class or caste differences. British sociologists such as Jackson and Marsden (1962) write of the problem of social alienation facing the LC youngster who "makes it" to grammar school. Relinquishing the

"restricted code" of the home environment for the "elaborated" code of the school is often construed as class or familial disloyalty, by the individual's family and former associates. In this third interpretation of "language deficit," language can be seen acting as an instrumental factor in CBED, but extrinsic to the process itself.

CHAPTER 3

Family Environment and Early Socialization

There has been a good deal of research in recent years into the influence of differences in child rearing practices, patterns of parent-child interaction, and the pre-school socialization process, in the explanation of class based differences in academic environment. This research is closely allied with the attempt to come to grips with the causes of underachievement of negro children in the educational system of the U.S.A. The Coleman report demonstrated what should perhaps have been obvious, that educational underachievement of oppressed minorities cannot be accounted for simply in terms of inferior physical school facilities, or the equality of teaching staff (Moyninhan, 1967).

Significant differences in educational achievement exist between black and white pupils even within the most depressed socio-economic strata. However, MC negro students are more comparable with white MC students than their LC counterparts. Race and class are highly overlapping factors. The factors underlying differential achievement based upon race and social class are probably

the same in both cases. Where achievement differences between white and negro LC schools or students exist, they can probably best be explained in terms of the degree to which certain causative factors are operating, rather than differences in the kind of underlying causes. For example, Deutsch (1966) found a lower level of achievement in the predominantly negro school that he studied, compared with the predominantly white control group of comparable class background. This difference seemed to stem from the higher incidence of disruption of the family unit in the negro sample. This leads to the suggestion that racial differences in educational achievement should be regarded simply as a more acute form of class based discrepancies, and are misconceived as independent or special problems for educational research or planning. However, this is a side issue, albeit an important one, to the problem at hand--assessing the research that seeks to explain class based discrepancies in scholastic achievement in terms of family and parental factors operating at the pre-school level.

The pre-school period has been emphasized on both theoretical and empirical grounds. Sarason (1960) has been strongly influenced by Freudian theory. Social relationships within the school, particularly the critical child--teacher relationship, are regarded as largely pre-determined by patterns of parent-child interaction in in-

fancy. This theoretical orientation has stimulated research that will be examined below. Another source of evidence has come from research into the ontogeny of the achievement motive, both within North American society, (Winterbottom, 1958; Rosen 1959, 1961; Crandall, 1964), and cross-culturally, (Child, 1958; Rosen, 1962; McClelland et. al., 1961). Hess and Shipman (1965), influenced by Bernstein's ideas, have sought to explain the genesis of different linguistic codes by class differences in the "mother-child communication system" in infancy, and in methods of regulating child behaviour employed by parents. Methods of behaviour regulation lead one from the cognitive to the normative domain, to an investigation of what kinds of behaviour MC and LC parents encourage or prohibit (Kohn, 1959) and to what class differences can be found in value structure and the concept of success (Katz, F. M., 1964). There is no dearth of empirical data. The problem is one of synthesizing material gathered by a variety of methods to support diverse theoretical positions, none of which is comprehensive enough to encompass more than a facet of the total problem.

Winterbottom's study is relevant to the topic at hand in so far as the achievement motive is related to social class and scholastic achievement. In a search for the antecedents of nAch, Winterbottom interviewed parents of high and low nAch boys, employing a developmental

schedule and inquiring into the achievement expectations of the two parent groups. She found that mothers of highly motivated boys insisted more on independence during the first eight years of age and rewarded achievement behaviour with more recognition and tender affection.

Rosen (1959) drew an explicit, and what has turned out to be important, distinction between "achievement training" and "independence training." The former she defined as, "competition in situations involving standards of excellence," in conformity with McClelland, and the latter, training to perform basic tasks of self care. LC in particular slum or ghetto children, partly because of parental neglect or large family size, learn basic self care, and explore the immediate neighbourhood of their homes at an earlier age than MC children. However, no positive relation has been found between early self reliance training and nAch--rather the reverse. Rosen's study employed a method of interaction analysis on tasks in which parents and child worked together solving problems of various kinds, chosen so as to maximize the need for child-parent interaction and structured so that parents either knew the solution or were in a position to do better than their son. In various points during test administration parents were asked to estimate their son's chances of success, or to choose goals for him to attempt to reach. High nAch boys were characterized by superior

performance, (controlling for IQ, thus indicating more effective task motivation), and more liking for the tasks (here it is important to note the test conditions of deliberately induced competition with an external norm). They were less likely to ask for aid and more inclined to reject assistance. All this may be interpreted as criterial validation for the projective measure of nAch. The most interesting aspect of parental behaviour lay in the differential roles of mother and father. More significant differences between high and low nAch boys were found for the mother's behaviour than the father's. Mothers of high nAch boys tended to "push" their sons, show a good deal of emotional involvement with their performance, and reward them with positive affect. The fathers on the other hand, tended to evince more autonomy statements, i.e., encouragement for the son to seek his own solutions and refraining from actively intervening. Heckhausen (1967) gives a prescriptive summary of the paternal role, that is consonant with Rosen's views:

"The optimal role for the father is more that of a benevolent and attractive model. He leaves room for his son to develop independently while imitating him. If the father interferes in an authoritarian way, he seems to make the son dependent, and to make it impossible for strong value attitudes to transfer to him [p. 198]."

Maternal and paternal roles in childrearing vary across SES. The high degree of father absence in lower class families or the model he provides may be a cause of

lower nAch in LC boys. (It would be interesting to possess data on son's perceptions of fathers across SES, assessing a) the degree of father-son identification; and b) the kind of role and values that the father projects to the son.) Of course, parental expectations of their children's achievement will be largely conditioned by their own level of achievement. Rosen found that parents of high nAch boys set their sons more difficult tasks and expected them to perform at a higher level. In a later study (1962), Rosen investigated the relationship between demographic variables and nAch. SES was the only one of the four variables (the others were family size, birth order, and mother's age) that showed a consistent, simple, relation to achievement need. The other variables showed significant effects only in the interactions.

It is doubtful that a direct linear relationship exists between child and parental levels of nAch. McClelland (1961) found that mothers of moderate nAch tended to have sons highest on nAch. Less is known about the antecedents of nAch in girls, but in all probability there are sex differences here.

Research on the origins of achievement motivation is linked with the study of anxiety (Atkinson, 1960; see below). Sarason's (1960) view of the genesis of test anxiety in schoolchildren was that ". . . the test anxious school child was one who in the pre school period had

experienced a parental-child relationship in which his adequacy had in one way or another been criticized" (p. 207). He found only weak evidence for an association between test anxiety and social class (see below). Parents' education seemed to be a more relevant factor. High anxiety children tended to have fathers whose level of education was lower than the mothers':

"When . . . pressure (for higher academic achievement) is exerted by a father who feels inadequate about his own educational attainments, and has doubts about his son's abilities, one has a parent-child relationship conducive to the increase of anxiety in the boy [p. 210]."

Sarason employed questionnaire and interview methods with families of matched pairs of HA and LA children. Fewer descriptions that distinguished HA and LA children were forthcoming from the mothers than the fathers that were interviewed by the research teams. This he attributed to greater defensiveness on the part of mothers of HA children. The evidence presented by Sarason bears only indirectly on his major hypothesis of the lasting effects of early socialization upon school performance mediated by anxiety.

The writer has been unable to find in the literature any strong evidence for the enduring effect of pre-school experiences upon later academic achievement. Factors of family environment do not seem tied so exclusively to any particular stage of development. Hess and Shipman (1965) admittedly present a good deal of suggestive data from their analysis of mother's speech samples and verbal

interactions with their children. However their results seem open to diverse interpretation.

There is no inherent conflict between theories that focus upon pre-school determinants and those that emphasise non-stage specific factors. In the broader sociological context it is understandable that child rearing behaviours should differ across social class and that MC and LC children should undergo quite different experiences in the educational system.

A major limitation with the hypothesis of enduring effects of early socialization involves the same basic fact of cumulative achievement deficit that was important in evaluating the language deficit theory. A cumulative process of achievement deficit may be triggered off by initial disadvantages arising from different pre-school patterns of socialization or parent child interaction, but this is obviously only a partial explanation.

A distinction was drawn between stage specific, or strictly developmental hypotheses such as those of Hess and Shipman, and hypothesised factors that are operative across longer periods of growth - relatively stable influences such as the value structure of the parents and their levels of achievement expectation for their children. Non stage specific hypotheses do not have the onus of demonstrating the critical importance of particular developmental periods, which seems to be a major shortcoming of present

developmental theories of socialization.

A demonstration of the importance of social dynamics in the home in the explanation of class based discrepancies in educational achievement is incomplete without an account of how class differences in child rearing practices are perpetuated in society at large. It would seem an oversimplification to attribute this to imitation, or some such direct learning mechanism, that would encourage parents to reproduce the parent-child relationship with their own children that they themselves experienced in infancy and after. No doubt parents project their past experiences upon their children and these influence the demands and expectations that they place upon them. These expectations probably have something of the character of self fulfilling prophecies--though in view of the small effects obtained by Rosenthal and Jacobson (1968), one should be wary of overestimating the importance of this simple mechanism too. Parental economic insecurity and low social status no doubt influence child rearing practices indirectly through parental self concepts. The self concepts of parents, (in relation to their own estimated levels of personal achievement, aspirations, degree of self confidence and status security) seem to be important factors that are given scant attention in the literature.

The school and home environments interact upon one another (in the non-statistical sense) in their effect upon the educational development of the child. Minimal or poor

school-parent community relations tend to be a feature of working class districts. For the MC child the school tends to be merely an extension of the home environment. Where the two agencies of school and home constitute separate or conflicting milieus the child is freer to play one off against the other and less subject to a single consistent set of socializing influences.

This is of course obvious to most educators. Advocates of compensatory "intervention" programs currently recognize "the need to break down barriers" between school and home environments (Gordon et al., 1969). It would be a false conception of the problem of CBED to attempt to determine whether the home is more important than the school or vice versa.

There has however been an over emphasis placed upon the socializing influences of the home during the pre-school stage. Simply because the mother-child interaction pattern of the MC home seems to provide more experiences of an educative nature, faster need achievement, or develop verbal skills, does not mean that at the pre-school period they are crucial or even important factors for later educational development. Rather than the enduring effects of stage specific factors, it seems more likely that CBED in so far as it is environmentally produced is a function of factors continually present through the educational development of the child. In view of the cumulative nature of CBED no other explanation seems very convincing.

CHAPTER 4

Motivational Components of Achievement

The concept of a generalized achievement drive is not universally acceptable to psychologists. Its precise meaning is by no means clear. However, motivational components of one kind or another are obviously relevant to school achievement and are closely related to the broader categories of social achievement. McClelland tends to conceive nAch as a drive to attain excellence, but as Heckhausen (1967) points out, there is no evidence to suggest that the pursuit of excellence differs in any important respects from competitiveness in tasks involving social prestige.

Atkinson recognizes the essentially social nature of the achievement drive by interpreting nAch as a dual motive to approach success and to avoid failure. This amounts not only to a recognition of approach--avoidance components in any achievement stimulating situation, but implicitly, the presence of the other person. However, Atkinson's research does not lead to an appreciation of the social dynamics of achievement motivation which will be a central concern of this paper.

Cooper and Howell (1961) indicate some critical

conceptual and measurement difficulties with McClelland's use of need achievement. They point out that while on one hand he recognizes the approach (hope of success [HS]) and avoidance (fear of failure[FF]) components as "sufficiently different to warrant treating them as distinct," they are conceptualized as two aspects of the same motive, occupying opposite positions of unidimensional continuum. This means that the same instrument is used for measuring both kind and intensity of motivation thus confounding the interpretation of particular scores. (For example, is a low nAch score to be interpreted as a strong motivation to avoid failure, or as weak motivation to approach success, or as the relative dominance of FF over HS?)

Atkinson (1958) is aware of the problem of confounding approach--avoidance tendencies with the unidimensional nAch scale. He cites evidence presented by Raphelson (1956), who found that nAch was negatively related to both scores on the Mandler-Sarason Scale of Test Anxiety and a psychogalvanic index of manifest anxiety obtained in a test situation. On the basis of this less direct supporting evidence Atkinson concludes that a high nAch score is not generally compatible with high test anxiety (the tendency to avoid failure). A low nAch score should at least indicate a weak approach (hope of success) tendency in relation to the avoidance motive. In later studies, however (Atkinson et al, 1960) he employs a test

anxiety scale as well as the projective test in order to delimit the two contrasting groups (the "success" and the "failure" orientated).

Aside from these methodological problems the literature on need achievement, which is now considerable, leaves much to be desired from the viewpoint of one interested in the motivational components of school achievement. Atkinson's (1966) theory of achievement motivation, while it does show a certain mathematical ingenuity is a laboratory model in the negative sense of the term. Useful in predicting superficially non obvious outcomes under highly specified experimental conditions, it is incapable of deepening our understanding of achievement motivation in the context of the school or any other societal organization or setting. The elegance of the theory as a closed system comprising a small number of interrelated variables defined in such a way as to yield testable predictions from specified input conditions indicates its major weakness--a simplistic disregard of the social context of the actual achievement situation. This is a strong judgement and requires more detailed examination of the model for justification. (In the interests of brevity, a basic familiarity with Atkinson's [1966] theory is assumed.)

Whilst Atkinson's model is precise in the specification of the functional relationships between its component variables, it is vague in its definition of two highly

important ones-- M_S and M_{AF} , and of conditions that determine their relative strength. The effect of the experience of success or failure upon the overall response tendency of the individual in the task situation ($T_S + T_f$) is a predictable "common sense" inference--even if the effect upon the incentive component is non obvious to the uninitiated. But what of the effects of success or failure upon M_S and M_{AF} ? And surely, failure at a task is more debilitating for future motivation under some social conditions than others? Is not the nature of the task an important consideration as well? There is an implied but unelaborated dependence upon variables extrinsic to the theory. For an example, the conceptualization of M_{AF} as a "defensive" reaction entails the concept of self-esteem, which is substantively related to the values of an individual's social reference group, and to the dominant value structure of society as it acts as a "press" upon the individual's behaviour. In this chapter on the generality of the need achievement motive, Atkinson (1966) makes no mention of its possible relation to the productive roles or prevailing values of society, save mentioning class and ethnic differences in measured nAch reported in the literature. Winterbottom's (1958) study of maternal child rearing practices is once again invoked to account for all differences found in the relative strength of M_S and M_{AF} .

There appears to be an historical reason why

Atkinson's theory is inherently unsuited to "real world" application to social problems, such as the motivation of school achievement. His theory, as Feather (1959) ably demonstrated, is generically related to theories of motivation developed in the 1940's (Festinger, 1942; Lewin, Pembo et. al., 1944) where the programmatic objective was to formulate completely general "laws" of social behaviour. The naive positivism motivating this approach may be partially responsible for the hiatus between academic research and contemporary social problems, or the neo-scholasticism of many contentious issues in psychological theory, (of which the question of the applicability of the "law of effect" to the domain of achievement-oriented activity [Atkinson, 1966, p. 337-340] is an example).

Katz's (1964) study illustrates the kind of background knowledge necessary for an understanding of the achievement motive as a functional variable in the societal setting. He investigated the meaning of success for children of different class background. His aim was to critically test Merton's (1949) theory that a common "ideology of success" defined in terms of achievement status through the possession of wealth, is an ubiquitous feature of North American society. His study concentrated upon class differences in three areas, a) the criteria of success; b) the procedures for obtaining success; and c) the relation of the subject to his chosen "model" of success. Wealth

or possessions ranked high as success criteria at all three levels of SES. (Subjects were sons of unskilled workers, "blue collar" or skilled workers, and "white collar" or MC workers.) MC pupils tended to employ occupational or educational status as a criterion more often than other groups, and LC pupils were more inclined to use "secure job"--thus indicating a lower level of aspiration and perhaps a sense of economic insecurity. All stressed "personal exertion" as a means to success, but MC subjects stressed it more, and children of unskilled workers were more inclined to mention "luck" and "influence" as the means to success. These results are suggestive of Rotter's (1966) variable of "internal" versus "external" control that Coleman found the best single discriminant between levels of academic achievement in negro schoolchildren. Finally, Katz found that SES was directly related to the likelihood that the subject's model of success was drawn from his own family.

Although this data does not bear directly on the McClelland-Atkinson measure of need achievement, the findings are suggestive enough to bring into question the notion that need achievement is a universal, unidimensional and comparatively simple predisposition to "strive for excellence." Aside from McClelland's (1961, 1969) studies social concomitants and implications of need achievement

have been scarcely investigated. An alternative account of the origin of achievement striving that emphasizes the role of the social environment of the school and in turn its relation to the productive forces and values of society, is presented in the following chapter.

CHAPTER 5

Social Relations in the School and the Theory of Sub-Cultural Differentiation

Educational research has neglected the study of social aspects of school environments and their impact upon the learning process. This is strange when one considers the importance middle class parents usually confer on placing their child in a "good" school. Teachers on the whole prefer working in middle class schools. Fewer apply to teach in lower class schools which tend to have a high staff turnover rate. It is generally felt that the job is harder and less rewarding. Teachers in lower class schools faced with greater teaching problems and usually fewer resources with which to meet them, are prone to adapt to the situation by taking the course of least resistance--falling into a routine, relying heavily upon institutionalized rules of conduct, and expending a great deal of effort simply "maintaining order." Social relationships within the school tend to become functionalized. As a consequence of its depersonalization, the work involved in teaching and learning becomes oppressive for both staff and students. Once a particular mode of operation has become established it is prone to be self perpetuating.

Libertarian educators have tended to make much of the child's "natural curiosity"--a propensity towards self education and discovery that is supposedly stifled by the education system. It is probably more accurate to say that before the psychological maturity which is necessary to maintain sustained self directed activity has been reached, a child's educational development depends to a great extent on the kind of relationship he establishes with adults who fulfill the role of teacher. In the standard classroom situation teacher-pupil interaction is conditioned by obvious factors such as the physical topography of the classroom, the activities in which the group engages, the size of the class, etc. It is also conditioned by less tangible influences, such as the pre-conceptions and mutual evaluations that the teacher and pupils have of each other in relation to the task they are engaged in. These attitudes will either facilitate or inhibit progress with the task at hand. Patterns of interaction are also determined by the needs that the participants bring to the group and the extent to which these needs are satisfied.

A great variety of social needs could be listed that teachers and pupils may bring into a classroom but the basic one is probably for what can only be imprecisely specified as recognition and positive self regard. This ubiquitous social need is very readily observable in young

children. It may manifest itself in healthy or unhealthy ways; may be channelled into striving for recognition in a circumscribed sphere of activity; may be arrested at an egocentric level of development, or socialized in the direction of altruistic endeavour.

In the classroom a child's need for recognition may be satisfied either by his fellow pupils or the teacher. The teacher, simply by his or her status as an adult, is under normal conditions a more potent source of social need fulfillment. The teacher distributes recognition to individual pupils on the basis of achievement, measured in relation to the performance of a reference group or norm (generally, for the individuals the reference norm is the class average, and for the class as a whole an age or grade norm).

The normative definition of achievement encourages interpersonal competition for recognition among the pupils. As Parsons (1959) points out, the principle of differential reward for differential achievement is a fundamental feature of our society's productive system. Bringing the young child to a socialized acceptance and understanding of this is one of the first major functions of the education system. Pupils in a classroom are generally quite homogeneous with respect to age, socio-economic and cultural background. These factors will considerably lower variability in task ability. The "contestants" may be

more closely matched by streaming. However, as the child's educational career unfolds, he forms certain expectations of reward or punishment in the classroom situation.

Positive regard is distributed by the teacher not only in the interaction sequence of the classroom, but it is institutionalized in periodic tests and the issuing of report cards.

The effect of competition upon the classroom situation is to create a scarcity of teacher distributed positive regard. This unique psychological property of competition, to create scarcity is important, because it guarantees the teacher a "captive audience" based upon incompletely gratified need.

It would not be beyond the writers intentions to infer from this a suggestion that the bond between pupil and teacher in the classroom is frequently a symbiotic one, based upon the distortion of a universal psychological trait, the need for recognition and positive regard. But this form of induced need has some utility as a non-coercive way of maintaining group activity on certain tasks that are neither meaningful nor enjoyable for the participants. It could be argued that it is in the social dynamics of the classroom where the individual learns that diligent pursuit of the irrational which makes the daily functioning of our society possible.

The effect of variability in ability within a class is to distribute positive regard unequally. "Bright" pupils are habitually rewarded and "dumb" ones punished. Where the range of ability is great, achievement motivation as Atkinson (1966) points out, may suffer due to the experimentally demonstrated fact that achievement striving is strongest when the subjective uncertainty of the outcome is maximized. It is possible to increase uncertainty in the distribution of rewards and punishments by selectively streaming students in class placement. But a gain in one area can create losses in another. Streaming can lower pupil and staff morale, by making some individuals feel inferior, creating jealousy and resentment. Hargreaves (1967) has made an insightful study of one British lower class high school possessing a rigid academic caste system. The intent of this paragraph has been merely to illustrate the intimate association between achievement motivation, the effects of competition, and the distribution of ability.

One pupil's ability to outperform another probably has an important hereditary component which, as discussed earlier, may be differentially distributed across social class in our society, but, educational skills are by definition and in fact cumulative. Failure at one level is prejudicial to success at a later stage unless the loss is recouped. Unfortunately, an individual who is punished

habitually for poor performance, less frequently rewarded with positive regard by the teacher, is more likely to lack scholastic motivation.

What kind of adjustment would one expect the child who has the continual experience of failure to make? The problem is basically, how to protect self esteem in a situation where it is frequently under attack. Parsons (1959) argues that a "very important function" of peer association "is to provide the child a source of non-adult approval and acceptance." Obviously this importance must be magnified when the chances of adult acceptance are reduced. Not only may one expect prolonged failure to provoke a self defensive rebellion against the teacher and the school situation but, at the same time, a stronger effort to win peer approval by "playing to the galleries" in an attempt both to undermine the teacher's authority, thereby removing the source of threat, and to restore self confidence.

Differential reward for different levels of achievement where achievement is normatively defined, results in the emergence and consolidation of class distinctions in the classroom and the school, resulting, in its more highly developed forms towards the end of the child's school career, in two distinctly conflicting patterns of motivation, or, in the terminology of Hargreaves (1967) and Cohen (1955), two antagonistic subcultures, "the academic" and the "deliquescent." Hence the social dynamics

of the school, which model the productive relations of society at large, are not only the source of the achievement motive, but the underachievement syndrome as well.

Some additional considerations are necessary in order to perceive why class distinctions in the school largely correspond with those of society at large. Firstly, the class origins of teachers and school administrators tend to ensure the dominance of the "academic" subculture in the school. Educationally defined intelligence is a highly valued attribute in our society, perhaps more so than any other human quality one could readily name, especially by the middle class. Teacher's prestige is enhanced by teaching "academic" subjects to "academic" pupils, preferably in "academic" schools. (In educational parlance the terms "middle class" and "academic" are virtually interchangeable.) However, it would be a mistake to regard this situation merely as snobbery on the part of teachers or the educational establishments. Preferences for the "academic" arises from the way in which society's productive forces are organized; from the tendency of benefits to be awarded proportionately to "qualifications" (not of course synonymous with "competence"); from the "incentive" system. Of course teachers as a class by their training and social position, may be more strongly predisposed to favour the system of individual achievement than other sectors of the population.

Many of the conflicting explanations that have been offered for CBED are not incompatible with the view that the achievement system (the social dynamic of the school) should have a particularly deleterious effect upon the LC child. In fact, it is almost necessary to postulate some form of initial deficit or "disadvantage" in order to explain why the process of subcultural differentiation which results in two conflicting subcultures--the academic and deliquescent--should fall out along social-economic lines. One could possibly adopt Becker's (1952) position that MC teachers tend to find LC children personally objectionable, often incomprehensible, and expect them to do poorly. There is no doubt some truth in her view, and in the recently revived case for self fulfilling prophecy (Rosenthal and Jacobson, 1968). However, evidence for significant initial educational deficit of LC children is strong. One major weakness of most of the educational deficit literature, lies in the scant attention it pays to the phenomenon of cumulative deficit, already mentioned. Also, the hereditary position, which as I have attempted to show, ought not to be categorically dismissed, would tend to explain why subcultural differentiation in the school might be expected to reproduce the class divisions in society.

If the school is to be regarded as an important agent of socialization then logically it should also be

seen as the agent of anti-socialization. Teachers have an understandable tendency to attribute their disciple's successes to their own efforts and the failures of their heretics to the parents. Educational researchers with their somewhat obsessive pre-occupation with the impact of the early home environment and "delayed gratification" may be committing the same error in a more sophisticated but less excusable way.

Some of the research on LC values and patterns of social interaction has been reviewed in previous chapters. The debate over whether LC culture is sufficiently different from MC culture to explain differences in achievement motivated behavior rests on a misconception. We are not faced with alternative subcultures so much as the situation that there can be seen in LC culture the societal manifestation of a self-defensive reaction to failure within the frame of reference of the dominant culture.

Descriptions found in the literature of LC children's peer relations, informal friendship groupings, and values, are consistent with this interpretation. The emphasis upon loyalty to the group conformity and solidarity that Bernstein found in the "Public" language of LC children suggests greater psychological importance for the peer group to the LC child, as well as a defensive "us-against-them" relationship. The "anti-social" gang is in the vast majority of cases a LC phenomenon (Cohen, 1955)

which conjures fearful images of "the greaser" in the minds of MC children. The apparent "lack of frustration tolerance" supposedly manifest in the behavior of LC children is probably the result of operating with higher levels of ambient frustration.

If the theory of subcultural differentiation is correct and CBED is a by-product of social relations that exist in schools which may in turn be linked with productive relations in the social system, then the prospects for significant change being wrought by compensatory education programs, as they are presently conceived, is bleak. This question will be raised again later. Having outlined a general theory the question should be raised of the extent of its applicability to local conditions.

Empirical validation of the foregoing theory is by no means a straightforward matter. It would require a complex program of investigation quite beyond the scope of this study. However, the program may be simplified by considering it in three distinct phases.

Firstly, and most importantly for the present study, there is the problem of determining the predominant pattern of social relations in the school and assessing the degree to which they confirm or invalidate predictions from the theory of subcultural differentiation.

Secondly, assuming the pattern of less favourable working relations and the presence of a deliquescent sub-

culture is found amongst LC schools, or in the "non-academic" streams within schools, then it must be demonstrated that this pattern is a causative agent in fostering CBED or in retarding the educational development of lower stream pupils. Teacher-pupil relations are probably the most important constituent of the learning environment, which educators generally agree is of crucial importance for the learning process. However, it is reasonable to ask for direct evidence that differences which may be found in the social environments of schools of differing class backgrounds, are active agents and not merely effects of CBED. But such direct evidence is not readily obtainable through experimental manipulation and control. Social relations in a school or classroom are progressively established over a prolonged period. They are made up of attitudes, expectations and values on the part of teachers and pupils which are relatively permanent and complex entities. Hence the learning environment is not readily amenable to manipulation as an "independent variable."

Thirdly, the theory outlined in this paper seeks to link micro level phenomena of the social environments of schools with the societal organization of productive forces at the macro level of the social system. In this paper the writer has only attempted to do this dialectically, by the use of argument. The problem of doing so empirically is discussed programmatically in the concluding

chapter. The account of the investigation which follows this chapter is confined to the first phase of empirical validation.

An outline of expected differences between social relations of LC and MC schools has been given also. The problem remains of how such differences may best be measured, and of specifying what kind of instrumental profile they may be anticipated to yield.

A system of classroom interaction analysis is an attractive research device because it involves less inferential extrapolation in the interpretation of test scores than traditional psychological tests. Interaction analysis provides E with direct measures of process but is less suitable for measuring state variables. For a comprehensive study of social relations within the school, both state and process variables should be considered. A Picture-Story Projective Test (P-S-T) with cards chosen to elicit themes related to schoolwork, pupil-teacher relations, peer relations and values and need achievement, was chosen as one of the major instruments for measuring social relations in the present study. From the theory of subcultural differentiation, content analysis of the Picture-Story Test (P-S-T) would be expected to yield indices of poorer pupil-teacher relations on anti-academic attitude towards schoolwork on the part of pupils, and peer values suggestive of a deliquescent subculture, when

the LC school is compared with the MC one. This pattern should be replicated with the Sentence Completion Test (S-C-T), also "tailor made" for the present investigation. Sociometric data on each class tested and teacher ratings of pupils were also obtained. It was hypothesised that where a defensive subculture exists amongst school pupils patterns of peer group popularity will be directly antagonistic to those derived from teacher ratings. Where the merit system of the school produces competition tension but not outright rebellion as with a deliquescent subculture, patterns of teacher and pupil peer ratings will be independent of one another. Only where there is both high acceptance and adjustment by the pupils to the goals and activities of the school, which are directed by the teachers and embodied in their personal evaluations of pupils, would one expect to find a high degree of correlation between the sociometric scores and the teacher ratings.

Between any two schools of contrasting socio-economic background the extent of differences between their respective social structures will be influenced by a) the size of the discrepancy in class background, and b) the age or grade level at which the schools are being compared. Generally speaking, between school differences may be expected to increase with the age of the pupil populations under investigation.

Also, there will be a certain amount of between

school variation attributable to factors outside the theory. There will be regional features peculiar to the district in which the school is located, or to the school itself, such as ethnic features of the pupil intake, the operating philosophies of administrators and teachers, the degree of personal compatibility and competence of school staff, which are at least partially independent of the model but that nevertheless influence the character of social relations in a given school. Such features however are not completely extrinsic to the model. For example, a principal's operating philosophy of education, which will influence the character of the school organization, will itself be conditioned by his experience of attempting to fulfill societally prescribed functions of the school within a given set of environmental conditions.

Factors extrinsic to the model could easily be removed by sampling a larger number of schools, but for obvious reasons this was not practicable in the present study.

PART II

CHAPTER 6

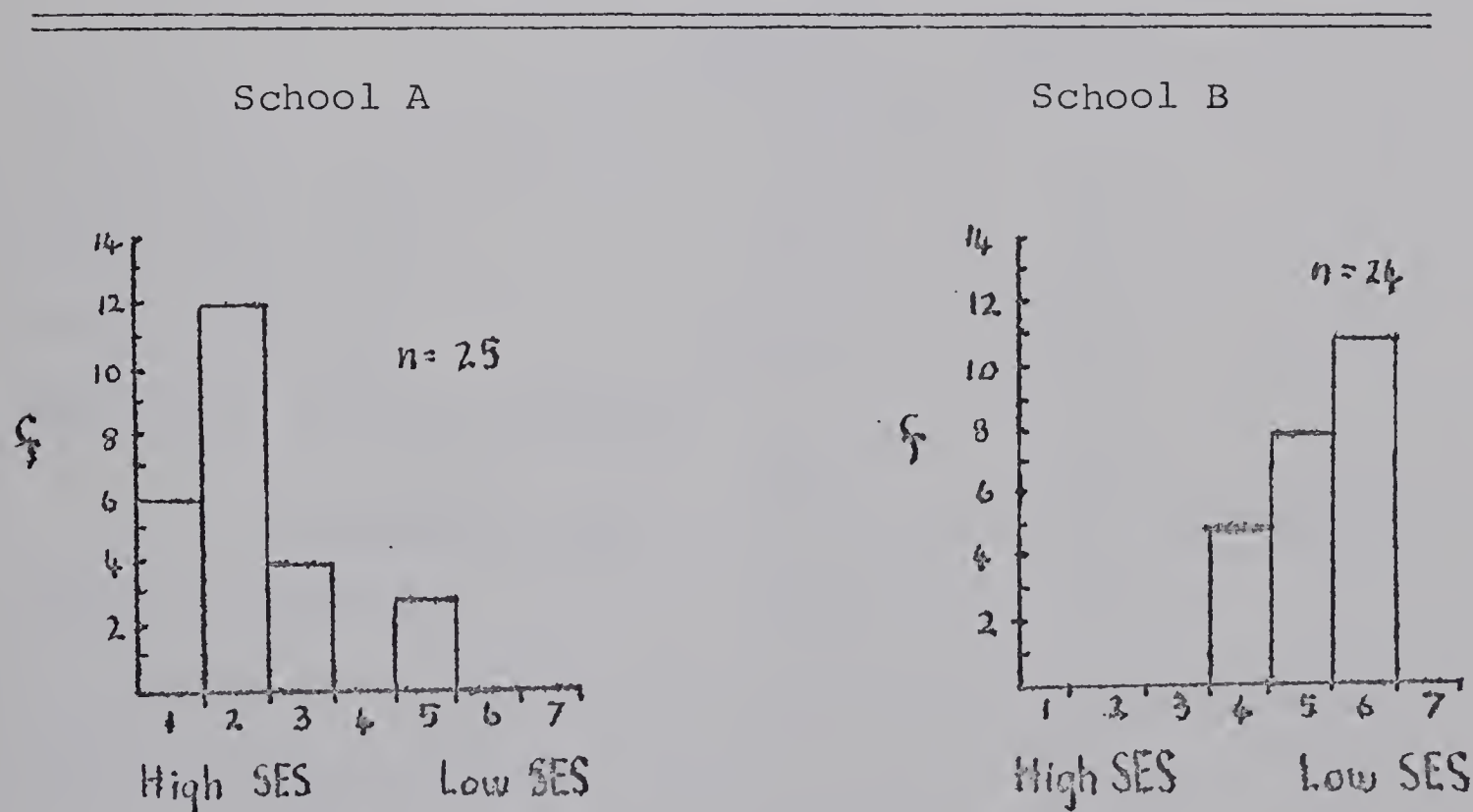
Description of Schools, Sample, and Method

In describing the social relations of a school, one may begin as Parsons (1959) did by attempting to delineate the basic functions of the education system at a particular level--grade seven, or "Junior High," in the case of this study. In this way one may deduce the basic features of the school's social organization from its role as an agent of socialization. To a certain extent this is what was attempted in the previous chapter, in developing the theory of two-subcultures which produce two hypothetical contrasting kinds of school social organizations, one geared for achievement and the other for failure. A less spectacular but safer approach is to begin with a concrete description of the school(s) in question. Of course this runs the risk of not seeing the forest for the trees, just as the other method can produce theories that bear little relation to everyday reality or produce overemphasis upon certain features to the neglect of others.

Two schools from the Edmonton Public School System were chosen. The class origins of pupils from the two schools are quite distinct but do not represent extremes of Edmonton's socio-economic continuum. Table 1 below gives the distribution of father's occupation classified according to the Blishen scale for pupils who were administered the projective test. (In some cases the father was either not working or his occupation was unknown to the subject.)

TABLE 1

Father's Occupational Status According
to the Blishen Scale



Thus School A could be described as "upper middle class" and School B as predominantly working class with

a sizeable proportion of lower middle class students. School A is situated in one of the city's wealthiest residential districts. The area surrounding School B is also residential, but rather decayed, where old houses are interspersed with low cost apartment units. Descriptive data for the two districts given below, drawn from 1961 census tracts is a little outdated. For comparative purposes, Edmonton's most economically depressed tract (Area C) is also included.

TABLE 2

Statistical Description of School Districts

	Area of School A	Area of School B	Area C
Persons per household	4.3	3.7	2.9
Persons per family	4.2	3.6	3.1
Family earnings	8,405	4,532	3,502
Dwellings: single detached (%)	98.4	83.2	31.0
apartments (%)	--	13.7	61.2
Rooms per dwelling	6.9	4.9	3.7
% of crowded dwellings	--	16.5	21.5
% of dwellings over 50 years old	--	16.0	49.8
% of dwellings in need of major repair	--	6.8	9.5

School A, the upper middle class school is a modern single and double storey building, of conventional design--classrooms branching from a corridor running the length of the building, with the administration and staff room centrally located. In contrast, School B, the lower-middle and working class school, is of the old "blockhouse" design characteristic of Edmonton's inner city schools. School A seems small, light and intimate by comparison with this three storey structure. Its interior is dominated by three large corridors, effective for carrying sound and large numbers of people, which when empty, give the building an air of imposing, almost oppressive, sobriety. As in School B the administration is centrally located, but isolated from the staff rooms which are at either end of the building. Also unlike A, in School B male and female staff have separate rooms. In this way the physical layout of the building limits, or at least modifies, informal interaction amongst staff and administration. Certainly divisions of rank, function and seniority are more apparent amongst the staff of School B than those of School A where the breadth of informal social contact is greater. Of course other factors than building layout contribute to the degree of overall cohesiveness and informality amongst staff members. In School B, the staff tend to be divided into "neophytes" and "old timers"--young teachers for whom School B is a first or second appointment and who generally do not stay long, and senior teachers who can recall better

days before the deterioration of the district and the decline in academic standards.

Of course the psychological and educational impact of plant and facilities are difficult to assess but, without going into detail, there is no doubt that the upper-middle class school is much better endowed. In School B noise carries between classrooms, in all directions. This is the most frequently mentioned grievance of teachers. The school's age was a frequent response to a sentence completion item from the children of School B. (Judging from its associations "old" has a negative affective connotation, expressing more than a fact, an attitude.)

The subjects for the present study constituted the entire Grade 7 population of School B, allowing for absentees at the time of testing ($n = 64$); plus three of the four Grade 7 classes at School A ($n = 77$). In neither school were the classes streamed according to academic achievement. No special criteria were used in assigning pupils to classes in either school. The age range of the pupils was 12 - 14 years.

A group battery was administered to all students and a Picture-Story Projective test to a selected sample ($N = 44$, 22 from each school). The instruments and the variables derived from them are described in the following chapter. Pupils were selected for projective testing on the basis of sociometric data. This was originally done in

the hope of maximizing the effect of peer group values and subculture upon the projective test results. It was reasoned that popular, high status pupils would best reflect the values of the student subculture and that unpopular students may be rejected because of their non conformity with these values. Neither of these propositions could be adequately tested with the methods of data analysis employed. The sample of recognizably unpopular pupils was too small for statistical treatment. In the between school comparisons of projective test data, the protocols of both high and low sociometrically rated pupils were therefore treated together.

Written recordings were made of the Picture-Story Test production which were later typed for analysis. Responses to the Sentence-Completion test were card punched and sorted several ways by the "sort-merge" program, so they could be printed out in a way most convenient for scaling and analysis.

Instrumentation

Several sources of data were employed for the comparative study of the social environment of the two schools. Roughly in order of importance they comprise:

1. A Picture Story test (P-S-T) consisting of nine selected cards from the T.A.T. and Michigan P-S test. Cards selected: T.A.T. - 1, 2, 8Bm, 9GF, 14. Michigan - 3, 6, 10B, 11G

2. A Sentence Completion Test (S-C) of 25 items - see Appendix 2.
3. An Anxiety inventory scale: The scale used was the second order anxiety factor, a weighted sum of 6 primary factors, from the I.P.A.T. High School Personality Inventory (1962 edition).
4. A sociometric scale: See Appendix 3 and 4.
5. Teacher ratings and interview data: for questions used, see Appendix 6.

The effective study of the social structure and climate of a group or organization requires a good deal of familiarity with the individuals involved. There is probably no way of circumventing the need for a fairly lengthy and close association with the group to gain this knowledge. However, some data gathering methods facilitate the growth of familiarity more quickly than others and this was a factor that influenced the choice of tests. For instance, the sociogram, though it is an old technique, possibly overworked in the past and therefore currently neglected, is quick to administer and aids greatly in familiarizing the investigator with his subjects. Similarly, the teacher interviews which could not under the circumstances be either thorough or particularly systematic were useful in forming some concrete impressions and aided in the interpretation of more formal test data.

Projective techniques were employed for two basic

reasons. Firstly, their flexibility renders them more suitable for an exploratory study than other methods, although to take advantage of this property requires a great deal of scaling and scoring. Secondly, the writer was interested in obtaining information on two independent aspects of CBED. The content of a P-S test may be used to throw light upon attitudes, modes of adjustment, and various sets of social relationships that go to make up the social environment of the school. Verbal productions may also be subject to linguistic analysis by examining the "formal" qualities of a subject's P-S-T responses. This distinction between form and content is a popular one in T.A.T. literature (Henry, 1956; Holt, 1958; Kagan, 1961; Schafer, 1958) and may be applied, although perhaps less successfully to S-C tests also. The formal qualities of verbal productions are of course not only linguistic. One may analyse the "logical" structure of a subject's stories, looking for the presence of certain kinds of formulation--such as a tendency to conclude with a generalization, or the degree to which casual connections are made explicit, the flexibility of temporal reference point, the tendency to go beyond the immediate situation depicted in the card, etc. These structural and stylistic aspects of the test performance can be difficult to define in explicit operational terms, but in the present study, proved more productive than content analysis of the P-S test.

Problems of Scoring, Validity and Reliability

The Picture-Story Test (P-S-T). There have been almost innumerable validation studies of the T.A.T. and, as with other projective tests, a great deal of controversy over its utility. Of course, statements as to the validity of a test are only meaningful in reference to a defined population and set of validity criteria. The majority of published studies on the T.A.T. take as their reference group an adult population and for their predictive target, some facet of the clinical or counseling situation. However, some of the well known applications of the T.A.T. in social psychology for the measurement of need achievement have already been reviewed. There is also the work of Hess, Deutsch, and others who have used projective or quasi projective methods in the study of LC children's speech. Obviously then, global judgements of the validity or reliability of P-S tests can only be misleading.

It will be convenient to deal with the structural and substantive components of the P-S test separately. Firstly, looking at the substantive component and restricting attention to the use of the T.A.T. with adolescent groups, it is apparent that some areas of the personality, attitude, and adjustment sphere are more amenable to assessment than others by this method. Henry and Forley (1959) conducted what is possibly one of the most carefully de-

signed and painstaking validation studies of the T.A.T. and found that in the study of adolescent personality the areas of "peer group" and "emotional adjustment" were more accurately assessed (with reference to three different kinds of external criteria) by the test in the hands of "expert" judges, than the areas of "family" and "mental functioning." It is important to note that Henry was correlating, by a matching procedure too complex to describe here, statements culled from diagnostic summaries with external validation criteria. He was not providing evidence for the utility of a particular scoring method or analytical procedure. The results are encouraging for the use of a P-S test in the assessment of the social environment of the school, but they do not provide the investigator with specific guidelines.

Henry was reassured to find that all judges working from statements drawn from blind analysis--36 protocols from subjects on whom a great deal of biographical, test, report, and interview data had been collected, were able to successfully link diagnostic statements with criterial data well beyond chance expectation. However, this in itself is no startling achievement. "There was little item agreement between judges, but each judge made enough correct decisions to yield a highly significant agreement figure [p. 22]." From this Henry concluded, somewhat ominously for those who would employ a strictly quantitative,

elementalist, approach to the T.A.T. (such as that of Murray or McClelland) that "Judges may arrive at essentially the same interpretive implications of the test report, by quite different routes. . . [p. 22]." One further finding should be mentioned because it bears on methodological problems of the present investigation which will be discussed shortly. Significant "fatigue effect" lowered the agreement scores of judges as they proceeded through the 36 matching tasks. Hence one may expect that if global judgements requiring a degree of sensitivity are employed by a researcher, then there is a definite limit to the number of cases he can usefully handle.

Perhaps the first requirement in deriving a comparative analysis of the social environment of the two schools from a content analysis of the P-S test protocols, is to differentiate the concept of "social environment" into a small number of potentially measurable dimensions. The following taxonomy seemed most useful in terms of theoretical parsimony and the kind of data readily provided by the P-S and S-C tests, though it is of course by no means a unique solution and possibly no better than many others:

1. Teacher-pupil relations
2. peer relations
3. pupil's attitudes towards school
4. socio-cultural values and personality traits of pupils.

In so far as each of these admittedly overlapping dimensions were assessed from projective data, elemental-ist-quantitative scoring methods similar to those employed for scoring need achievement (Atkinson, 1958) or simple response categorization systems, were used. It was not feasible to apply the more intuitive methods such as sequence analysis (Henry, 1956). With the exception of nAch, all the content scoring variables are specific to one or two cards, rather than drawn from the whole series of pictures. Scales were not formulated on an apriori basis but constructed on the basis of familiarity with the test data. Scales derived in this manner tend to be more reliable and give a better summary representation of the data than those which are not anchored in a specific body of data (Zubin et al., 1965). A reliability check on the scoring of nAch was obviously required. Rescoring card 1 one month after the initial scoring yielded a retest correlation of $\rho = .81$ which is satisfactory and comparable with the indexes of inter judge reliability given by Atkinson's (1958) manual. The other content variables consisted of either "theme" categorization or simple ratings of affective tone as used by Costin (1949). Once appropriate thematic categories have been chosen and defined there is very little ambiguity involved in classifying elements of stories. For the affective tone ratings, doubtful responses were given a middle rating,

together with failures to respond, and neutrally toned responses. Carelessness or shifting standards would be the only sources of within rater error variance in this situation. The latter was controlled for by randomizing the order of scoring in the case of the P-S protocols.

Several comprehensive systems of formal analysis have been proposed for the T.A.T. Henry's (1956) is the most exhaustive and Dana's (1959) possibly the most simple and objective. Formal, alternatively called structural and stylistic, analysis of P-S tests may ultimately prove of more importance than content analysis. However, these variables pose greater difficulties for the analyst. The limits of formal analysis are poorly defined. Formal features range from broad organizational features of the subjects, stories, such as their logical coherence, or the manner of approach to central concepts, to characteristic patterns of language usage. Formal analysis encompasses both the amount and quality of the verbal production, as well as the manner in which it was produced.

The formal analysis that has been applied to the P-S-T protocols is by no means comprehensive. Emphasis has been placed upon linguistic features of the productions as these are more readily definable in explicit terms than other structural aspects.

The amount of verbal production, the first of formal variables, was measured by the total number of lines or typed transcript for each subject.

The major formal measure, the degree of syntactic complexity, proved the most difficult of the scales to construct. Some of the problems associated with this kind of measure have been discussed in Chapter 2. The scale (see Appendix 5) is a weighted sum of several independently judged components. In scoring it was necessary to sweep the data several times firstly to establish cutting points for complete utterances-sentences, then to check for the presence of critical components. It was thought necessary to employ an independent rater to check upon the objectivity and reliability of the scoring system. Rescoring of 10 randomly selected protocols by the independent judge yielded a rho of .78 but intrascorer reliability for E was higher (rho = .91).

It was desired to have some indices of semantic features of P-S-T productions. Variety, and complexity of meaning may to a certain extent be gauged by word count and classification procedures using Thorndike's (1938) frequency of word usage tables but this method is tedious to apply, and because of the high percentage of common words in the protocols, would have required a great deal of scoring.

One aspect of semantic complexity lies in the degree to which a subject's P-S-T productions transcend the "here and now" of the scenes depicted in the cards. Stories to cards 7, 8 and 9 were scored as to whether or not

they made reference to actions or events not depicted in the picture scene. This variable has been called the "level of projection" manifest in the protocol.

Stories are given character and individuality by the use of dialogue and the naming of characters. This stylistic quality of test responses we shall call "dramatization." The degree of dramatization present in a protocol may reflect the operation of several underlying factors--(see discussion of results).

The Sentence-Completion test (S-C-T). Considering the frequency with which it is used in clinical practice and its relatively favourable research ratings vis a vis other projective tests the S-C-T has been rather neglected in the literature. There are several well known forms in use of which Rotter's is the most standardized Goldberg (1965) criticizes the predilection of researchers to custom make their own S-C tests for particular research purposes, often with slim justification for the selection of item stems. He sees the need for more careful investigation of the effects of variation in stem formulation, induced instructional set, and conditions of test administration. Diversity in these respects, he rightly suggests, leads to incomparability of research findings.

There has been disagreement among investigators over appropriate strategies in constructing S-C tests,

revolving around the question of the optimal degree of structuring and the heterogeneity of item stems to be employed.

Nash (1958) argues that:

"Variations in response to a sentence fragment should be concentrated along a limited number of dimensions, preferably along a single dimension. Simultaneous variation along a variety of dimensions dissipates the information in the responses, leaving little information available in any given dimension which is of interest to E. There is then, an optimum heterogeneity in S's responses: this optimum is characterized by maximum heterogeneity along a limited number of dimensions and by maximum homogeneity along all other dimensions [p. 570]."

Certainly an ambiguous stem elicits a variety of responses which make the item difficult to relate statistically to other items in the test. Scores derived from item clusters often give greater discriminatory power than single items, provided the clusters are not too heterogeneous. Test or cluster homogeneity may be assessed from intercorrelations of items that have been scored on an ordinal scale. However, where an item is ambiguous, response categorization, rather than ordinal scaling along a single dimension, must be employed. If a test contains a large proportion of ambiguous stems, its homogeneity and cluster structure is very difficult to determine. Of course there is no *a priori* reason why ambiguous items should possess more or less discriminatory power against a certain criterion.

Moreover, item or item cluster discriminatory power is not necessarily the most important criterion in the choice of stems. E may simply be interested in determining the

associative connections that exist around certain key concepts, or aspects of a group's or an individual's social environment. Here stems of low ambiguity may exert too strong a "pull" on the subject's response, thus obscuring the underlying associative structure. In short, whether an S-C test is to be treated after the fashion of other word association data, or as an item pool for a psychometric device, will affect the degree of structure that E is likely to impose upon the stems.

There is probably a way around the problem that employing ambiguous stems leads to indeterminate internal structure of the test, when computer processing of test responses is possible (see below). Sixteen of the 25 items in the S-C test used in this study seemed amenable to ordinal scoring along the dimension of "emotional tone." At face value the table of phi coefficients (in Appendix 6) would appear to indicate a low degree of test homogeneity and little internal structure (there are only 17 associations beyond the .05 level of probability. Seven to eight may be expected on the basis of random numbers for a matrix this size). However, some items although rateable for emotional tone, could probably have been better handled by some other form of classification.

Multiple classification of item responses was not feasible. A pilot study would have been useful to preselect items and response categories. Scoring reliability was not

directly measured but may be confidently inferred from the agreement of the results of two independent analyses of the data. In the initial determination of scoring categories, responses were ordered by item number and scored by E. The pattern of significant chi-squared yielded by this preliminary analysis was the same as that of the main analysis when responses, this time ordered by subject, were rescored.

Nevertheless, manual classification of subjects item responses introduces error, is laborious, and time consuming. Computer programs have been developed which should greatly enhance the analytical power of the S-C test.

Goldberg's (1966) research is of methodological interest here. Using a program called "the general enquirer" developed by Stone et. al. (1962), Goldberg analyzed the sentence completion responses of highly popular and unpopular high school students (four males--two popular and two unpopular--and four females). The "general enquirer" is a computer system for content analysis and retrieval of verbal data which uses the word as its basic unit of information.

Briefly, a lexicon is placed in storage, together with one or more sets of word groupings, referred to as "tags," of items in the lexicon. The tags may refer to "natural" word groupings, such as, "self"--all pronoun references to the personal self (I, me, mine, etc.); or they may refer to more "artificial" groupings based upon theoretical considerations, e.g.: "symbol of female sexuality"--forms

of receptacle listed in the lexicon (cup, bowl, etc.). A psychosocial dictionary has been developed by McPherson et. al. (1963). For specific research purposes, alternative sets of tags may be developed. Analysis of data input consists of a "tag-tally" program which provides a relative frequency count for each protocol on all tags used in the system. The chief value of this device lies in the flexibility of approach that it makes possible when using objective analytic procedures on verbal or written productions. As in the present study, the potential flexibility of projective tests is often sacrificed in the interests of objectivity when E because of limited time and resources, must choose a single, incomplete, method of scoring the data.

The Anxiety Scale (H.S.P.Q., 1963 ed.) and the Sociometric Scale. The H.S.P.Q. is a well known personality test. Its second order anxiety factor was chosen over other measures for its superior psychometric qualities. The reason for including an anxiety scale in the group testing was somewhat vitiated by a change in the original design of the study. However, it was thought to be a possible factor relevant to the social climate of the school and so of sufficient importance to be retained. Finally, the items used to construct the sociometric scales are given in Appendix 3.

Procedure for Testing

Testing was carried out concurrently in both schools over a period of approximately one month. All testing, both group and individual, was carried out by E. All group tests--the sociometric ratings, the S-C-T and the anxiety scale--were administered sequentially, in the above order, a single battery of tests which took 42 to 45 minutes to complete. E introduced himself to the class as a student from the University doing research on Grade Seven's. It was explained that E did not have time to interview everybody and so had decided to construct a questionnaire, but that perhaps about one-third of the students in Grade Seven would be interviewed. After distributing the questionnaires E asked if there were any questions before he explained how to answer the questionnaire. It was notable that no students in School B questioned the intent or purpose of the study whereas in School A in two of the three classes there was quite lively interest displayed (e.g., "What's it all for?" . . . "Is this for a thesis?" . . . "How many pages does it have to be? . . ."). E explained that he was making a comparative study of two schools in the EPSS and was interested in the effects of socio-economic background upon the social organization of the school. This was apparently sufficiently enlightening or mystifying. E went to pains to explain that "this is not a test" but afterwards a few who persistently wanted to know "how they did" were invited

to ask E individually when they saw him around the school. It was further explained that E would be the only person looking at the questionnaires and they were encouraged to answer the questions frankly. Specific instructions for the tests are given in Appendix 3. Generally, honesty was encouraged but not stressed. Pupils were advised simply to "give the first answer that comes to mind, and work as quickly as possible, without skipping any questions." Students were to raise their hand if they encountered difficulty with any particular item. All classes worked quite diligently on the questionnaire. Pupils in School B, being more docile, were somewhat easier to test, but conditions for obtaining reliable measures were close to optimal in both schools. The presence or absence of the teacher did not appear to affect the class atmosphere.

Individual testing with the P-S-T was carried out during normal lesson periods. No students appeared to be unduly threatened by the test situation. School B pupils tended to be more taciturn and guarded than those of School A, who were generally freer with their questions and observations. Instructions given for the test were task orientated (see Appendix 3), but no external motivation was applied. This was left up to the intrinsic interest value of the task or the individual's desire to impress. On the whole, the girls seemed to be more responsive and enjoyed the task more than the boys, although the greatest

variability in interest lay between individuals. Those who questioned why they in particular had been chosen were told that it was a matter of random selection.

TABLE 3

Content Variables in the Analysis of the Social Environment of the School

Area	Test	Scale
1. Teacher Pupil Relations	P-S-T	Card 3 "classroom situation" stories fell naturally into 4 loci of interest about which elements of stories could be classified (see Appendix 2).
1. Teacher Pupil Relations	P-S-T	Cards 5 and 6: all statements referring to "teacher" were extracted from the protocols categorized and tallied (see Appendix 1).
1. Teacher Pupil Relations	S-C-T	Items, 7, 9, 12, 22: responses categorized, tallied, and subjected to chi squared tests of sig. (See Appendix 2.)
2. Peer Relations	P-S-T	Card 4 "checkers game" response categorization and chi test (see Appendix 1).
2. Peer Relations	P-S-T	Card 8 "beach scene": response categorization (see Appendix 1).
2. Peer Relations	S-C-T	Items 2, 6, 17, 19: responses categorized and tested for sig. (See Appendix 2.)
3. Attitudes to School	P-S-T	Card 1) response categorization Card 6) : (See Appendix 1.)
3. Attitudes to School	S-C-T	Items 4, 11, 13, 15, 16, 20, 21, 23: categorized and tested for sig. (See Appendix 2.)

TABLE 3 (Continued)

Area	Test	Scale
4. Socio-cultural Values and Personality	P-S-T	Need achievement Scale: applied on all nine cards (see Appendix 1).
4. Socio-cultural Values and Personality	S-C-T	Items 1, 5, 10, 13, 15, 18, 25: categorized and tested for sig. (See Appendix 2.)
4. Socio-cultural Values and Personality	H.S.P.Q.	Primary personality factors and second order anxiety factor subject to one way ANOVA between schools and across grade point averages (see page
2 and 2	Socio- metric scales	Sociometric ratings compared with teacher ratings (see Appendix 4).

CHAPTER 7

Results

For purposes of presentation, it is simpler to give the results by test rather than organize them around theoretical constructs. The latter will be done in the "analysis." Some of the results, those of a normative type, are given in various appendices. They provide useful background to the interpretation of those presented below.

The Picture-Story Test (P-S-T)

Content analysis of the P-S-T provides data relevant to hypotheses pertaining to the social structure and climate of the schools, whereas the "formal" P-S-T variables (mean protocol length, syntactic complexity, projective level), have greater bearing on the questions of language deficit and relative levels of cognitive functioning. However, it should be stressed that these two areas are by no means unrelated, both in the conceptual and the empirical sense. The elements of form, style and content are not precisely delineated but merely convenient descriptive categories.

Scales applied in the content analysis of the P-S-T are either card specific or apply to the protocol as a whole. A card by card analysis of thematic differences between the

TABLE 4

Significant Differences in Specific Card Content Between Schools

Card	Difference	Interpretation
CARD 4 "Game of Checkers"	When card themes were rated for the presence of competition tension (Appendix), pupils of School A rated higher than those of School B. P < .05	Alternative interpretations suggest themselves: a) higher level of competition in peer relations for School A pupils. b) greater task involvement and hence greater projection in School A pupils. c) greater facility in verbal elaboration of experience.
CARD 2 "Country Scene"	The girl may be perceived in a familial relationship with the background figures of the farmer and the woman. When the background figures are perceived as poor, School B pupils tend to perceive a direct familial relationship between them and the girl. The reverse holds for School A pupils. P < .01	Class background forms a component of the self-concept which influences the S's perception of a depicted social situation. More specifically, LC and MC children react differently to the perception of poverty.

TABLE 4 (Continued)

Card	Difference	Interpretation
CARD 7 "Operation Scene"	<p>School A and School B pupils differ in the degree of litera- lism manifest in their reaction to a card calling on some sym- bolic interpretation</p> <p>.10 >P >.05</p>	<p>A "symbolic" response indi- cates: a) greater interpretive effort; b) a more successful adaptation to the stimulus properties of the card; c) greater mental maturity or sophistication.</p>

production of pupils from the two schools is provided in Appendix 1. It is notable that the significant differences which were found in specific card content may be regarded as partially stylistic. Two of three refer to the quality of the story production. The other may be related to need achievement or to the sphere of peer relations.

Perhaps the most direct measure of school social climate from the P-S-T lay in the assessment of pupil-teacher relations from an analysis of all statements pertaining to "teacher" in the protocols. Each of these associations to "teacher" was classified according to categories given in Table 5. These categories were then collapsed into a two way classification for chi square analysis. (This collapsing was necessary for conceptual clarity and also because of low cell frequencies. Signs in Table 5 indicate which categories were included in the 2×2 table.)

Both mean and median levels of need achievement yielded slightly higher scores for School A pupils. However neither differences were significantly above the chance level when tested with one way ANOVA and chi square analysis. When the P-S-T protocols were examined for statements of need: "wishing for . . . etc.," in order to further test for possible differences in motivational structure between the two schools, it was found that the major category for both schools was one that could be labelled "self advancement"--the desire to "get on," to master some activity that

TABLE 5

Classification of Associations with "Teacher"

Category	School A	School B	Sign
No affective connotation, description of action	29	15	+
Teacher anger or disciplinary action	21	14	-
Pupil defiance or insubordination	1	4	-
Grounds for dislike or expressed dislike of teacher	1	3	-
Positive teacher sentiment or pupil-teacher relation	1	3	+
Threats of disciplinary action	1	0	-
"Disappointment" on part of teacher	1	0	0

2 X 2 Classification of Associations with "Teacher"

	Positive or Neutral	Negative	Total per School
School A	30	24	54
School B	18	21	39

$$\chi^2 < 1.00 \text{ for 1df, } P > .10$$

(N.B. "Total per school" may exceed the sample size $N = 22$ because "teacher" statements often occur more than once in a given protocol.)

could be regarded as an index of social motivation, (e.g., wants to be a doctor, wishing to play it really well). School A had a higher proportion of self-advancement wishes than School B, though this may partly reflect simply greater verbal elaboration of their P-S-T responses.

TABLE 6

Overt Statements of "Wishing For . . ."

	School A	School B
Protocols with no overt "wish" statements	9	11
Self-advancement wishes	10	6
Other wishes	3	5
	<u> </u>	<u> </u>
	n=22	n=22

Three of the four "formal" variables (length of Protocol, Syntactic Complexity, Level of Projection, and Dramatization) are compared across schools in the following tables.

TABLE 7

Mean Length of Protocol \bar{x} School

	\bar{x} Length	S.D.	
School A	57.95	45.09	F = 2.53 for 1 and 42 df.: P = .12
School B	38.68	34.58	

TABLE 8
Syntactic Complexity χ School

School	n	$\bar{\chi}$	S.D.	
School A	22	7.22	2.37	F = 8.72 for 1 and 42 df.: P = .005
School B	22	5.09	2.43	

TABLE 9
Level of Projection χ School

School	n	$\bar{\chi}$	S.D.	
School A	22	1.95	1.13	F = 9.95 for 1 and 42 df.: P = .003
School B	22	0.90	1.06	

In the interpretation of these findings, it is important to consider that these three scales nAch are inter-correlated. The intercorrelations are given in Table 10

TABLE 10
Intercorrelations of Ordinally Scaled Variables for the
P-S-T

		1	2	3	4
NAch	1	1.00			
Length	2	0.23	1.00		
Syntactic Complexity	3	0.24	0.26	1.00	
Level of Projection	4	0.44	0.41	0.51	1.00

(N.B. The above Table is for raw score data.)

Obviously, these variables do not represent orthogonal factors. Similarly, the fourth "formal" variable--"dramatization of stories" is probably moderately correlated with the other variables. The use of dialogue, and character naming--features that were checked as either present or absent in a protocol--are highly overlapping, (seven of the eight protocols using dialogue also employ character naming, a characteristic shared by only nine of the 44 protocols). It therefore seemed justifiable to subsume both characteristics under the one interpretive label "dramatization of theme," results for which are given in Table 11.

TABLE 11
Dramatization of Theme χ School

	Use of Dialogue	
	Present	Absent
School A	7	15
School B	1	21
$\chi^2 = 11.10$ for 1 df. $P < .001^1$		
	Character Naming	
	Present	Absent
School A	8	14
School B	1	21
$\chi^2 = 7.83$ for 1 df. $P = .01^1$		

¹Although the above chis have been corrected for contingency, the P level should be regarded with caution because of low expected and obtained cell frequencies.

The Sentence Completion Test (S-C-T)

Results of the analysis of the S-C-T are given in Table 12 and the scoring system applied to this data may be found in Appendix 2. S-C-T protocols were analyzed three ways by school, sex, and academic standing in class. A sample of the total, comprising the most popular and unpopular pupils in both schools according to the sociometric measure, was also analyzed. Because of the large number of statistical tests made for each set of comparisons, it was decided to set the significance level at $P < .01$ and to regard $.05 > P > .01$ as approaching significance.

TABLE 12
Sentence Completion Test Items \times School

Item	Response Classification				
"The trouble with school . . .	1	2	3	4	5
	teachers	"work and time spent on work"	"plant and equipment"	"school rules"	some other response
School A	6.3 ¹	38.0	8.9	0.0	46.8
School B	17.2	39.1	7.8	10.9	25.0

¹percentages by rows

$\chi^2 = 16.97$, $df = 4$, $P = .001$, $N = 142$

collapsing categories 2-5 and testing with χ^2
and 1 df , $p = .04$

TABLE 12 (Continued)

22. "I hate . . ."

	"teachers"	Other Responses
School A	2.5	97.5
School B	18.8	81.3

(percentages by row)

$$\chi^2 = 10.53, df = 1, P = .001, N = 142$$

5. "I would like to be . . ."

	Professional	Sports Hero	Non Professional	Non Occupational
School A	41.8	17.7	17.7	22.8
School B	26.6	12.5	46.9	14.1

$$\chi^2 = 14.15, df = 3, P = .003, N = 142$$

4. "This school . . ."

	Positively toned Response	Neutrally Toned or No Response	Negatively toned Response
School A	44.3	31.6	22.8
School B	21.9	45.3	32.8

$$\chi^2 = 9.05, df = 3, P = .02, N = 142$$

A good number of pupils in School B responded with "old." This was classified as a neutral comment, except when accompanied by some other clearly negative qualifier. Had "old" been regarded as a negative comment--and there is justification for this--the p level would have been lower.

TABLE 12 (Continued)

6. "The kind of kid I don't like . . ."

	"show off"	"tough"	"sissy"	"immoral"	"snobby" "brainy"	"other"
School A	16.5	19.0	11.4	6.3	20.3	26.6
School B	10.9	9.4	3.4	17.2	35.9	23.4

$$\chi^2 = 13.19, df = 5, P = .02, N = 142$$

TABLE 13

Sentence Completion Test Items χ Sex

Item	Response Classification		
------	-------------------------	--	--

8. "I am very . . ."

	Positive	Neutral	Negative
Boys	33	31	7
Girls	16	49	7

(Cell Frequencies)

$$\chi^2 = 9.94, df = 2, P = .006$$

24. "Sometimes I think I'm . . ."

Boys	19	24	27
Girls	05	18	35

$$\chi^2 = 9.01, df = 2, P = .01$$

TABLE 13 (Continued)

25. "Fighting . . ."

	Positive	Neutral	Negative
Boys	17	29	25
Girls	05	22	44

$$\chi^2 = 12.74, df = 2, P = .002$$

15. "The laws we have . . ."

Boys	14	27	30
Girls	25	28	15

$$\chi^2 = 8.06, df = 2, P = .02$$

This sex difference, approaching significance, was due almost entirely to male-female differences in School B. When chi squared analysis was applied separately to Schools A and B--the P levels obtained were $P = .007$ and $P = .68$ respectively.

13. "Reading . . ."

Boys	30	21	20
Girls	42	12	14

$$\chi^2 = 7.24, df = 2, P = .03$$

10. "The future . . ."

Boys	14	40	10
Girls	29	32	7

$$\chi^2 = 6.54, df = 2, P = .04$$

TABLE 14

Sentence Completion Test Items χ Academic Rank in Class

Item	Response Classification		
	Class Rank	Positive	Neutral Negative
12. "Teachers here think of me as ¹ . . ."			
	Top Quartile	11	18 5
	Middle Half	18	46 13
	Bottom Quartile	4	12 16

$$\chi^2 = 16.90, df = 4, P = .002$$

¹This item is intended as a measure of how the child thinks he is perceived by the teacher.

13. "Reading . . ."

Top Quartile	28	3 3
Middle Half	31	22 21
Bottom Quartile	14	5 14

$$\chi^2 = 22.30, df = 4, P = .0002$$

The High School Personality Questionnaire Anxiety Scale

When the six primary factors that constitute HSPQ anxiety factor scale were tested with one way ANOVA for significant differences between schools, two factors differentiated the groups beyond the .05 level of significance (see Table 15).

TABLE 15

Significant Primary Factors and Second Order Anxiety
Factor from H.S.P.Q. χ School

Factor	$\bar{\chi}$ School A	$\bar{\chi}$ School B	F	P
Q4 "Ergic Tension"	17.96	19.06	4.60	.03
H "Constitu- tional Timid- ity"	19.05	17.90	4.56	.03
A "Anxiety"	5.21	5.62	1.58	.21

(N.B. Tests were carried out on the total sample with unequal n's (n = 77, 64) but P levels for the homogeneity of variance test were all within acceptable limits.

The failure to find a significant difference in general anxiety level between the two schools is not surprising. Factor H, alternatively labelled "threat susceptibility" and "constitutional timidity," yielded an unexpected difference which is difficult to account for. Cattell and Scheir (1961) state that:

"The evidence is now substantial that Factor H is one of the most highly constitutionally determined factors. As to interpretation, evidence is that it operates at the positive pole as venturesomeness or para-sympathetic resistance to sympathetic action, as opposed to autonomic threat reactivity or timidity at the negative pole [p. 56]."

The finding requires replication before its significance warrants serious consideration.

The higher "ergic tension" level of School B pupils was not unexpected, considering the definition offered by

Cattell (1962): "The best general interpretation of Q4, at present, is that it represent a level of excitement and tension, due to undischarged drive (frustration [p. 18]."

Sociometric Data and Teacher Ratings

The general strategy in the analysis of the sociometric data was to compare teacher ratings with pupil ratings in order to indirectly assess pupil-teacher relations. The theory of sub-cultural differentiation would predict general agreement between teacher and peer ratings of pupils for the MC school or the high achieving group, and disagreement in the LC school or low achieving group, where patterns of popularity and prestige derived from peer ratings predictably would be more or less in direct opposition to those teachers. While the methods used in this part of the study lacked quantitative rigour, and there was an insufficient number of teacher ratings for reliable assessment of the pupils as seen by teachers of School A, no evidence was found to support the above prediction. A detailed descriptive analysis of the sociometric ratings for each of the three classes in both schools may be found in Appendix 4.

Essentially peer and teacher derived ratings of popularity and esteem appear to be independent of one another in both schools. In School B, one boy was outstandingly unpopular, both with pupils and teachers--although he was not without one or two friends. His clearly rebellious posture was rejected by the other pupils and this may be

taken as strong evidence against the existence of a "delinquent" sub-culture in the LC school, at least at the Grade 7 level. As mentioned earlier, Grade 7 is a transition period. Peer group values at this stage are still ill-defined. Teachers may not be held in high esteem by many of the students, but the legitimacy of adult authority is uncritically accepted by the majority. When it is openly challenged pupils at this stage tend to mirror the teacher's disapproval. This pattern is not so clearly observable in School A where the line between conformity and rebellion appears to be less distinct.

CHAPTER 8

Analysis and Discussion

The four major variables of content will be examined in turn to determine the character of the differences in the social structure and climate of the two schools which can then be evaluated in relation to the theory of sub-cultural differentiation proposed earlier. The significance of the formal and stylistic variable differences will also be discussed.

The S-C-T but not the P-S-T indicated a greater degree of conflict between pupils and teachers in School B. Teachers in the LC school are more likely to be spontaneously mentioned as an object of dislike (S-C-T, item 22), are more frequently listed as "one of the troubles with school," (S-C-T, item 11). However, these results are somewhat mitigated by a failure to find significant differential response trends to S-C-T, item 7 ("most teachers . . ."), the most overt index of pupil-teacher relations on the test. Also it was expected that where poorer teacher-pupil relations exist, they will be reflected in pupils' reports of the opinions they imagine teachers have of them. (S-C-T, item 12: "Teachers here think of me as") This may be true, but the results show that item stems designed for

a particular purpose must be phrased with care. Item 12 was found to strongly differentiate children of different levels of scholastic achievement within a class, but not between pupil populations of the two schools. The frame of reference for a pupil's estimation of teachers' attitudes towards him will be provided by the immediate environment of other members of his class. Considering this it is understandable that item 12 should only yield within school differences. In other words, it is quite possible that the common response ". . . just another kid" has a different meaning in the two schools.

Responses to moderately or highly unstructured S-C-T items elicited under instructions to "work quickly" approximate word association data (Goldberg, 1965). Within an associative structure the "meaning" of a response will be defined by proximity to other responses and associative clusters. This is a familiar and useful model to work from in the measurement of attitudes through verbal associations. The need for caution in interpreting single item response differences between contrasting populations is obvious. Not only the connotations of item stems vary between individuals or groups (which is what E is attempting to assess) but the connotations of item responses may also differ. Because of the great communality of shared meaning for native speakers of a particular language, this is not generally a serious problem. It does become so when dealing

with idiomatic speech and slang. In such cases there is no substitute for a working familiarity with the dialect or idiom in question, and in interpreting S-C-T responses E is obliged to rely upon translator's intuition. This problem arose with S-C-T items 6 ("The kind of kid I don't like . . .") and 17, ("The sort of kid I would want to be friends with . . ."), particularly the former. These items were designed to examine peer group values through friendship preferences. It proved difficult to code responses for the two schools with a common set of categories. E.g., "Fem" is a popular term of abuse amongst School A pupils. "Sissy" its closest synonym, is found in the responses of School B pupils. However, "fem" possesses a stronger sexual connotation, subsuming the notion "queer" in both its sexual and social senses. Its meaning is also more extensive. It can be applied to the over-studious type and the "goody-goody." It is not surprising then, that when "fem" and "sissy" were given the same response classification that School A yielded a higher relative frequency of responses. These complexities render item 6 difficult to interpret. The problem here is not that verbal associations do not reveal differences in value structure between the two groups, but that because the association between values and language usage is so close, common semantic categories for response classification cannot easily be created.

It could be argued however that S-C-T item 6 (friendship preferences) does suggest a difference between pupils

of the two schools that is predictable from the theory of sub-cultural differentiation. School B pupils are more prone to express resentment of "snobs," which is perhaps a sign of social inferiority feelings, or at least, insecurity or uneasiness about one's social status.

"Brainy kids" are unpopular in both schools, but no more so in one school than another. This hostility may be seen as a defensive reaction to competition induced tension. Social sanctions against being "too smart" are strong.

The P-S-T was generally unproductive of significant between school differences in the areas of peer relations and socio-cultural values. Responses to card 4 ("game of checkers") showing a more explicit emphasis on competitiveness in School A pupils may be variously interpreted. The failure of the need achievement scale to differentiate between the two school populations at the conventionally accepted level of probability is in conflict with Rosen's (1956) findings and expectations formed on the basis of familiarity with the literature. Admittedly, the sample drawn is rather small, but this in itself seems insufficient to account for the results. A between school comparison does not amount to a straight forward middle class--working class contrast, because of the substantial porportion of children in School B who are sons and daughters of small entrepreneurs. The kind of middle class background usually associated with high need achievement scores is not exclusively confined to School A, some of whose pupils come from what may be

identified as Edmonton's "Upper class" or "managerial elite." Furthermore, regional or historical factors may be operative. The motivational structure of MC children in North America has most likely changed considerably since 1958. The achievement drive, as conceived by McClelland et. al., appears to have been eroded by changes in middle class world view. Education remains, is in fact increasingly, the major tool of social mobility, but the petit-bourgeois value system assumed in the measurement of nAch is no longer taken as a categorical imperative by the more highly educated sectors of the population. Consequently the achievement motive is less likely to be as openly and naively reflected in P-S-T productions as it was previously.

School B pupils appear to be more negative in their attitude towards school (S-C-T, item 4) although this single sign does not contribute a great deal to the overall picture of sub-cultural differentiation. Content analysis of the P-S-T is applicable to specific areas of adjustment rather than a global measure such as "attitude towards school." There is a significant difference in the pattern of pupil complaints against school (S-C-T, item 11). School B pupil's grievances are focused around "teachers" and "school rules." Certainly authority was much more visible to the casual observer in School B. An externally visible system of discipline is probably characteristic of LC schools and an important index of school climate of the school. If found in combination with a high frustration

level in the pupils, such a climate could appropriately be described as "repressive." Factor Q4 from the HSPQ, while it does differentiate significantly between the two schools, is only a rough measure of the general frustration level amongst the students, and of course no connection can justifiably be inferred between it and the social organization of the school on the strength of the data at hand.

The formal and stylistic variables derived from the P-S-T were generally more productive of differences between the two schools, but unfortunately their interpretation is fraught with ambiguity because of confounding influences. It was rather surprising to E to find that although School A pupils produced longer protocols, the difference between schools was not a significant one. Formal differences were found to lie in the quality of the productions, rather than their quantity. As may be expected, these qualitative scales are quite highly intercorrelated.

The problem of deciding whether the measure of "syntactic complexity" reflects formal (grammatical in the generative sense of the term) or simply stylistic differences in verbal productions of the two groups has already been discussed. A scale based upon the weighted sum of intuitively and non systemically derived indices of syntactic complexity is obviously an unsatisfactory instrument. It is becoming increasingly recognized by educational researchers that the hypothesis of language deficit does not constitute a satisfactory explanation for the educational deficit of

the disadvantaged, that LC children possess language skills generally far in excess of what their scores in a test situation indicate. Language form as well as content is very much influenced by situational factors. A "restricted code" is often the product of a threatening or defensive encounter.

A high score on "projective level" constitutes the use of imaginative inference in the production of stories rather than simple description of the stimulus attributes of the cards. Minimally acceptable responses are usually no more than descriptions of what is depicted in the card. A low score on this variable could indicate either poverty of imaginative resources, or lack of motivation, or both.

Dramatization of a story tends to add interest and novelty to what might otherwise be a nondescript production. It encourages the narrator and listener to imagine characters depicted in the cards as individuals rather than social stereotypes. One might even say that it reflects on the part of the narrator, a tendency to verbalize, or make explicit the personal relevance of experience--presumably a characteristic of "elaborated coes." But before indulging in these flights of the analytical imagination, it is well to bear in mind basic facts of the test situation. The subject has been removed from class to be interviewed by a stranger, a representative of that eminently middle class institution, the university. He has been "asked" to tell stories about a set of pictures--a task that has some of

the features of an oral examination, and which must be rather mystifying to the uninitiated. In all probability MC and LC children enter the interview with different sorts of expectations that affect task performance. For the mildly apprehensive subject who does not understand what is going on, the most reasonable response strategy to avoid trouble, is to adhere to the obvious, leaving as much initiative as possible with the examiner. This seems to have been what many of the School B pupils, in varying degrees, did.

When making any between group comparisons of performances on psychological tests, it is often difficult to control for possible differences in initial expectation, but usually they must be taken account of in the evaluation of the results. When comparing children of markedly contrasting socio-economic or cultural backgrounds, experimental control in this area is virtually impossible. One teacher in School A remarked how "everyone in the class" wanted to be interviewed. No indications of such enthusiasm came to E's attention in School B.

No systematic analysis was made of the teacher interviews but some fairly clear impressions could be formed from them. Nearly all teachers attributed the shortcomings of pupils to "parents" and "home environment." School A pupils were seen as "having too much," and consequently possessing a casual attitude towards school work and an imperturbable self-assurance, aptly illustrated in the alleged response of one student upon being chastised by the

TABLE 16

Signs of a Delinquent Subculture from the S-C-T in
Relation to Findings of the Present Study

Item	Predictive Response	Strength of Pred.	Findings
4. This school . . .	negative tones responses	strong	confirmed
5. I would like to be . . .	reference to unskilled job or direct reference to leaving school, e.g., "out of here"	moderate	partially confirmed
6. The kind of kid I don't like . . .	derogatory reference to those who achieve academically--usually perceived as "snobs," "goody Goodies," "sucks," etc.	strong	partially confirmed
7. Most teachers . .	derogatory references	strong	not confirmed on item, but partially confirmed by others (Items 11 and 22)
9. If the teacher tells me my work is bad . . .	"don't care," or a smart reply designed to "put down" the teacher	strong	unconfirmed
15. The laws we have . . .	negative response	strong	unconfirmed (significant sex differ- ence)

TABLE 16 (Continued)

Item	Predictive Response	Strength of Pred.	Findings
17. The sort of kid I would like to be friends with . . .	type who takes dares, harasses teachers, engages in "anti-social" activities	strong	unconfirmed
20. In Class I . . .	reference to "having fun," "fooling around," disruptive activities	moderate	unconfirmed
22. I hate . . .	reference to "school" or "teachers"	strong	partially confirmed
25. Fighting . . .	expressed approval of or failure to disapprove	moderate	unconfirmed (highly significant sex difference within School B)

principal . . . "My father could buy and sell you." Older teachers in both schools were more inclined to express hostility towards pupils than younger ones, but there are a number of possible reasons for this.

There are significant differences between the social relations and work climates of the two schools in the present study, but to what extent do the findings support the theory of sub-cultural differentiation outlined earlier? There is no strong evidence for the existence of a delinquent sub-culture in School B, at least at the Grade 7 level, although there are signs that one may emerge by the time the pupils reach Grade 9. (Interviews with teachers would support this. By Grade 9, students from the School A are "more difficult to handle" as well, but middle and lower class school rebellion are quite different phenomena.) Largely on the basis of Hargreaves' (1967) research, certain expectations can be formed for the recognition of a delinquent subculture from the S-C-T. These expectations together with the pertinent findings of the present study are given in Table 16.

It was difficult to prescribe "signs" of a delinquent sub-cultural pattern for the P-S-T. All the research data that the writer was able to locate for the TAT was focused upon the diagnosis of psychopathy (or sociopathy) rather than the analysis of response tendencies of the delinquency-prone child. Apart from the need achievement studies, research on social class differences in TAT

responses was likewise very thin (Riessman and Miller, 1958; Mason et. al., 1956). Examination of stories for cards directly related to school and the classroom situation did not reveal notable differences between the two schools with respect to classroom behavior (card 3), attitudes towards authority (card 6) or school work (card 5). Nor were extra-punitive tendencies more apparent in the protocols of School B pupils.

There are a number of "behavioral" indices of school climate and social relations, not used in this study because of limited time for data collection, but which are more direct and reliable than test data--such variables as the percentage of juvenile convictions, amount of destruction of school property, absenteeism and staff turnover rate. Classroom interaction analysis is a potentially much more valuable technique than conventional group or individual testing, because the latter necessitate an inferential leap of quite great magnitude, from test scores to predictive criteria.

Sub-cultural differentiation, is a process that will be found to be more or less complete, depending on the discrepancy of class background in the schools understory and the educational level that is being sampled within the schools. While the two schools studied in the present investigation constituted marked contrasts in terms of class origins of pupils, they do not represent extremes of Edmonton's

socio-economic continuum. For this reason it is difficult to compare results with many published North American and British studies.

Summary

The primary aim of this paper has been to argue for the importance of the differential effect of school social environment in the development of social class based educational deficit. The assortative function of the education system and its possible effects upon the distribution of genetic characteristics which may to a large extent affect educational achievement was not overlooked. The question of linguistic deficit was considered but it was felt that the interpretation of linguistic analyses of LC childrens' speech production is fraught with ambiguity because of the confounding influence of non-linguistic variables. Also it was argued that the present state of linguistic theory makes it impossible to determine with any useful degree of accuracy, the effects upon cognitive growth of possessing a dialect divergent from standard English. The possible effect upon CBED of class differences in child rearing practices, parental values and patterns of parent-child interaction were explored, but perhaps not in full enough depth to do them adequate justice. However, it appears that there has been a relative overemphasis upon the pre-school stage of development both in research and experimental compensatory programs for "the disadvantaged child."

The unique importance of any given stage of development for CBED has not been demonstrated and stage specific theories appear to overlook the cumulative nature of CBED. Significant class differences in need achievement were not found in the present study. A review of the literature (see Katz, 1967) does not indicate that the relationship between SES and need achievement is a strong one. The ambiguity of interpretation of need achievement scores derived in the traditional manner was discussed. The writer's major objection to need achievement theory arises from its tendency to conceptualize the achievement motive as a unitary, simple, and universal, drive for "success in competition with a standard of excellence," without regard for the social context in which achievement behaviour takes place. In the school, this social context comprises the system of differential reward for success in competition with others, the degree of commitment to the system on the part of teacher and pupils, and the distribution of the probabilities of reward and punishment which will be a complex function of individual abilities of the pupils and their and the teacher's expectations.

Commitment to the system of differential reward for achievement or punishment for failure in competition with others is seen as one of the major socializing functions required of the education system. In other words, the position argued for in this paper is that the basic pattern

of working relationships in a school is predetermined by the societal functions the school is expected to perform. In some sense this statement is undeniable but the crucial research question is, to what extent does it apply to specific features of the social environments of schools. Is the class system and the system of productive relations at the macro level responsible for observed differences in social structure between schools of contrasting social class background? This question refers to the third phase of empirical validation of the theory mentioned in Chapter 5. Before attempting to see how it could be answered, it is advisable to recapitulate in summary form the essential elements of the theory and the findings of the present study in order to render in a more tangible form the general idea of how macro societal phenomena may be reflected in the micro level situation of the school.

While commitment to the system of achievement will vary across individuals and probably to some extent across social class, it is an ubiquitous feature of our culture and system of production. As Deutsch (1966) points out, the achievement motive is not so much absent as it is frustrated in the disadvantaged child. In this paper, psychological commitment to the achievement system was hypothesized to interact with subjective probabilities of success and failure in such a way as to noticeably effect social relations within the classroom and across schools of different SES. Because

of the need to protect self-esteem, pupil sub-cultures in LC schools were hypothesized to be anti-academic and deliquescent, with pupil-teacher relationships characterized by a degree of hostility detrimental to the learning process. ("Anti-academic" and "anti-social" it was argued, may be regarded as synonymous terms.)

Some differences were observed between the social climate and relations of the two schools chosen for the present study which were partially supportive of the "theory of sub-cultural differentiation." However the choice of a picture-story test as one of the major instruments to study school social environment may not have been a wise one in the absence of an automatic data handling system for content analysis. Manual scoring of objective indices from projective techniques, because of the time it takes, generally results in a failure to make full use of the available data.

A variety of alternative approaches exist for measuring state and process variables pertaining to the social structure of the school. Interaction analysis has been suggested as a potentially useful technique. From a rather cursory search of the literature, the writer was unable to find any studies where the social class background of pupils was examined as an independent variable (other than as a control) upon classroom interaction. Withall (1952) developed a technique for measuring social climate of the classroom based upon a seven category classification of teacher

statements ranging along a "pupil-control" to "teacher-centered" continuum. Pupil-centered statements were defined as those intended to praise, encourage and bolster the learner, or to help him gain insight into a problem. On the other hand, teacher-centered statements function to assert the teacher's authority, forcibly alter the direction of pupil activity and to defend or justify the teacher. The scale was empirically constructed from recorded classroom lessons and material was presented on its validity (see Withall, 1952). - An adequately high degree of intra and inter-scorer reliability with interaction recorders may be obtained only by extensive scorer training and periodic conferences to discuss scoring criteria.

Harriott and St. John's (1966) attitudinal study of school social climate, using a nation wide sample of teachers and principals illustrates a different approach again to what is essentially the same problem. Their findings, as reported by Katz (1967) are of direct relevance to the thesis of this paper:

"Both principal's and teacher's replies to a series of questions indicate that the lower the school SES the smaller the proportion of teachers who enjoyed their work, had personal loyalty to the principal, desired to remain at their present school, had favourable opinions of the motivation and behaviour of their pupils, and did not waste a lot of time in the classroom. As reported by the principal only, the lower the school SES, the smaller the proportion of teachers who were competent, made an effort to improve their competence, and were strongly interested in their students [p. 177]."

The overall pattern suggests a general malaise in the

social climate and working relations of the LC school that quite probably has a detrimental effect on instructional efficiency. School authorities have an understandable tendency to attribute this situation to external factors such as the family background of the pupils or the "poor quality" of the district. As a complete explanation of the situation, this is unconvincing. A shortage of qualified teachers or inadequate facilities may be concentrated in LC schools but this is more part of the symptomatology of the problem than the cause.

Katz (1967) has developed a model similar in some respects to the one presented in this paper. In comparing experimental task performance of high and low achieving negro boys (Grade 6 level drawn from a predominantly low SES sample), he found a tendency for the poor scholastically achieving group to deliver a greater percentage of negative self-reinforcements in response to their own performance on an experimental task. In other words, in the absence of an external judge, they tended to denigrate their efforts on a task only marginally related to schoolwork. Katz hypothesized--somewhat tortuously the non Skinnerian psychologist may feel--that self-delivered punishment is anxiety reducing (due to a supposed associative contingency between verbal admonition and the termination of punishment). Katz's basic point is that the LC negro child comes to internalize a system of negative reinforcement to his own performance

that derives from patterns of adult-child interaction. He claims, not without empirical evidence, that "many teachers inadvertently dispense strong negative reinforcements in the form of personal disapproval and rejection" thus, "strengthening his [the LC negro child's] tendencies toward indiscriminate self-derogation of his own learning efforts."

Because he does not pursue his enquiry further, Katz is left with the truism that the LC negro child is simply the victim of racism and class prejudice with the focus of blame placed on the teacher in the classroom situation. To avoid this cul de sac it is necessary to adopt a more global approach to the problem.

Competitive individualism, for its ramifications for the social structure and climate of schools, and for the hypothesized relation between micro and macro levels of sociological analysis, is perhaps the key concept of this paper. As a description of the social relations that exist between individuals engaged in similar activities within the productive system, it is summarily adequate. The child is initiated into the productive system through the social relationships that pertain in the classroom and which are equally important from the functionalist viewpoint as the substantive aspects of the curriculum. (They may be regarded in fact as the "hidden curriculum" of the school.)

The relationship between the implicit socializing content of the classroom experience and the explicit content of the curriculum is interesting because these two components

are often not in harmony with each other. When such conflicts become apparent the credibility of the educational endeavour is easily lost unless the conflict can be faced and resolved.

The deleterious psychological effects of what is generally referred to simply as "competition" have long been realized by educators who have identified themselves with the "progressive" tradition of educational philosophy. Many who dislike the achievement motive for its asocial and egocentric qualities nevertheless regard it rather mystically as a necessary component of "human nature." For them, the notions of incentive value and egocentricity are fatalistically combined.

The study of educational incentives and the social structure of the classroom in relation to functional goals of the education system has been neglected by those in the field of educational research. Bronfenbrenner's (1963, 1967) work is an exceptional attempt by a North American psychologist to investigate the socialization process in the school in relation to macro-societal forces (what would be referred to perhaps as "cultural mores" by the western social scientist or the "superstructural" aspects of the productive system, by his Marxian counterpart). His experimental study (1962) of the role of the peer group vis-a-vis adult authority is of less interest to this paper than his account of Soviet classroom teaching practices and philosophy (1963).

The subject is obviously too extensive for treatment here but two features of the Soviet system of education clearly illustrated in Bronfenbrenner's discussion are worthy of mention for this study. Firstly, the Soviet education system--and this would apply to any socialist system--is much more self-consciously a socializing agency than the western model. Allied to this is a more important distinguishing characteristic. Perhaps the fundamental difference between the socialization process of socialist and non-socialist schools lies in the use of the collective or a means for progressively extending the field of social identification of the individual, or in more mundane terms, of promoting social maturity.

No system of education can neglect its socialization function and preserve the integrity of the society it serves. In our schools much of the socialization process is covert and has been a neglected topic of research by social psychologists. Most of the experimental studies of different kinds of incentive and classroom social organization were reviewed by Murphy et al (1939), who appropriately observed:

"Any discussion of . . . studies of the effect of incentives must be seen in relation to the cultural background which has set so much store by individual achievement, and has nourished this movement to find ways of stimulating the greatest achievement in the individual [p. 501]."

It is doubtful if the socialization function of the school can be adequately understood without a "cross cultural" approach to the problem. Most contemporary cross cultural research (e.g., that of Bruner, 1966; Witkin, 1966; Vernon,

1965; MacArthur, 1969) has been between societies of greatly different levels of technological development. A major source of variability in these studies seems attributable to an urbanization factor operating between research samples. Aside from the political problems--both practical and "theoretical"--associated with the study of education systems in socialist countries, and those familiar to cross cultural research generally, (such as sample matching, language instrumentation, etc.: see Berrien, 1966), there will be problems specific to the research topic that may be practically insoluble.

Two major problems in this category relate to macro level variables. The level of technology, the state and rate of economic development are strong determinants of the social class composition and productive relations of a society. There is the argument that technological development is the crucial determinant; that socialist and capitalist systems inevitably converge and finally merge under the necessity of centralized planning as the means of production grows more sophisticated. Perhaps needless to say, the writer does not share this view but it must obviously be given serious consideration in any comparative study of socialist and non-socialist systems of education.

The second problem revolves around the definition of a socialist mode of production. The issue is inevitably a controversial one because obviously no simple defining

criteria exist.

In the face of these difficulties, there is a consideration which makes the cross cultural study worthwhile, perhaps even of great importance, in understanding the role of the education system in the process of socialization, and for examining possible solutions to the problem of CBED. All attempts at ameliorating, and most of those at understanding the problem of CBED in North America have taken place outside the context of the organization of the means of production. The results have not on the whole been impressive. Very little significant study (see Bratton, 1967) has been made by those involved in educational research of those societies where a wholesale effort has been made to socialize the means of production and remove the injustices of class privilege.

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APPENDIX 1

Detailed Content Analysis of P-S-T

Card 1: (TAT Card 1.)

Description: A young man is contemplating a violin which rests on a table in front of him. (The description of these and other TAT cards is taken from Henry [1956]).

Major Themes: Tends to elicit a fairly small range of stories revolving around a central theme of learning the violin. Achievement themes are commonly elicited though they are often perfunctory--e.g.:

"He's wondering if he wants to be a violin player/I think that he'll grow up to be a violin player/probably become famous"

No discernable differences were found between the two schools. When responses were categorized according to the characters attitude towards learning the violin, whether favourable, neutral or negative the following data was obtained:

	Attitude Towards Learning Violin		
	Positive	Neutral	Negative
School A	7	10	5
School B	9	9	4

Card 2: (TAT Card 2.)

Description: Country scene; in the foreground is a young woman with books in her hand; in the background is a man working in the fields and an older woman is looking on.

Major Themes: Fairly wide variety of themes elicited. The girls books tend to evolve school related themes; her solitariness is a frequent cause for comment; the people in the background are often seen as poor labourers, or slaves. It is interesting to note that seven pupils from School B who

commented on the apparent poverty of the farmer all see the girl in the foreground as his daughter. In contrast, the five LH pupils who make this observation either explicitly or by implication indicate that the girl bears no familial relation to the farmer: E.g.:

" . . . well it looks like she's may be the mistress's daughter/these are the servants/guess she doesn't like the way they're treated/she wishes she could help them have better houses/so they wouldn't have to be slaves/she wishes she could do that for the whole world/like . . ."

Historical themes are popular on this card.

Card 3: (Michigan Card 3.)

Description: Classroom scene; a somewhat old fashioned classroom; middle aged female teacher standing in front of class; a boy standing is reading to the class which is turned to watch him; part of the American flag can be seen hanging in the foreground.

Common Themes: This card elicits a very limited range of themes. It was possible to break stories down into four natural theme loci--a) the teachers attitude or disposition towards the class or the boy standing up; b) the boy's feelings; c) the attitude of the class in relation to the boy; d) the class situation as a whole and the outcome. Theme loci categories and their tallies are given below:

Theme Locus	Category of R	School A		School B	
teacher's attitude	strong anger	5		6	
	mild anger	5		3	
	good humour	0		1	
	not specified	12	55%	12	55%
class in relation to boy seen as:	punishing	9		6	
	neutral	2		1	
	conniving against T.	1		1	
	not specified	10	45%	14	64%
boy's feelings and attitude	guilt, humiliation	4		1	
	compliance, apprehension	4		3	
	defiance	1		2	
	unspecified	13	59%	16	73%

Theme locus	Category of R	School A		School B	
class situation	punishing	13		11	
as a whole	neutral	1		0	
and outcome	rewarding	1		1	
	unspecified	7	32%	10	45%
	Story theme is				
	unanalyzable by the	1		0	
	above scheme				

From inspection of the above table it is obvious that there are no striking, or even significant, thematic differences between the two schools on this card. However, one may note the pattern of higher percentages of responses in the "unspecified" category for School B. This is a pattern that is evident in most cards (see below) and may be regarded as a consequence of the lower responsiveness to the test on the part of School B pupils, their relative lack of verbal facility, or inability to crystalize experience in words. It is also noteworthy that in the majority of cases, an ostensibly innocuous depiction of a classroom situation is perceived as "punishing." There is a weak suggestion of a relatively "intra-punative" orientation on the part of School A pupils compared with that of School B.

Card 4: (Michicagn Card 6.)

Description: A game of checkers; three boys and three girls are crowded round a checker board; one of the boys is moving his checker; all watching intently.

Common Themes: this card elicited a highly stereotyped set of responses. Stories differed from one another chiefly in the elaboration of background detail. A "competitiveness" index could be derived from the amount of tension introduced in to the story of the game. A check was made for the presence of competition tension if any of the following characteristics were present in the stories--making the game a "championship" match; a detailed move by move description of the game; direct statement referring to tense game atmosphere.

	Tension Indicated	Tension Not Indicated
School A	10	12
School B	4	18

$$\chi^2 = 4.14 \quad p < .05$$

Card 5: (Michigan, 11G)

Description: Girl at her desk in an empty classroom, bent over an open book, apparently thinking; dark background.

Common Themes: Little variety of theme evoked. The girl is generally perceived as "kept in" for a detention or, less frequently as doing extra work to "catch up" or "get ahead." Themes were classified firstly by how the situation was perceived and secondly by the girls reaction to the situation.

Situation	Sch.A	Sch.B	Reaction to Situation	Sch. A	Sch. B
"kept in" detention	17	12	worried	3	0
			compliant	9	6
			rebellious	2	1
			unclassified	2	2
			unspecified	1	3
"behind in work"	4	4	strive to improve	1	4
			compliance (do what required)	3	0
			rebellious		
			unspecified		1
other	1	6			

The cell frequencies are too low for strong trends to be discernable, but in so far as some trends do emerge they are similar in both schools.

Card 6: (Michigan, 10B)

Description: Principal's office; young boy standing before a desk; stern middle-aged man standing in background with eyes fixed disapprovingly on the boy and talking to him.

Common Themes: In all cases this was perceived as a disciplinary scene, which in all but two instances, took place in the principal's office. Consequently it was possible to the "theme loci" method of categorizing content used for card 3.

Theme Locus	Category of R	School A		School B	
the offense	fighting	3		5	
	destruction of property	3		3	
	misbehaving in class	4		1	
	stealing	2		2	
	bullying	2		1	
	other	1		2	
	unspecified	5	25%	10	42%
boy's reaction	making up excuse	5		3	
	fear, apprehension	4		3	
	guilt, remorse	2		1	
	defiance, cheek	2		2	
	other	1		2	
	unspecified	7	33%	12	52%
man's reaction	delivering lecture	9		0	
	questioning him	2		3	
	advice, guidance, explanation	0		1	
	anger	2		2	
	other	4		2	
	unspecified	3	15%	6	26%
outcome	painful punishment	5		6	
	light punishment	5		5	
	forgiveness, another chance	1		2	
	other	2		0	
	unspecified	7	35%	10	43%
Unscorable Themes		1		0	

No significant differences in terms of content were detectable in this card.

Card 7: (TAT 8BM)

Description: An adolescent boy looks straight out of the picture; the barrel of a rifle is visible at one side, and in the background is the dim scene of a surgical operation, like a reverie image.

Common Themes: This card elicits a variety of themes. Content could be analyzed a number of ways. The following frequency tabulation appears to indicate a slightly higher

incidence of achievement orientated themes in School A.

Theme	School A	School B
achievement	5	1
war	5	4
gangsters/crime	3	2
historical	2	2
accident	1	2
other	3	0
unelaborated ¹	3 14%	11 50%

¹Scored if the scene was merely described, without attempt to elaborate on context, or to make up a story. The dream quality of this card provides an added complexity to the card. In order to respond to this aspect, and to make a more convincing imaginative integration of the card elements, the background scene on the card as a whole, must be interpreted symbolically as a "mind picture," "dream," etc. It is interesting to compare the relative proportions of literalism for the two schools on this card.

Literalism vs. Symbolic Integration

	Symbolic Interpretation	Indeterminate or between ²	Literal Interpretation
School A	13	5	4
School B	7	5	10

$$\chi^2 = 4.87; \text{ for 2 df. } .10 > p > .05$$

²As in the case of a couple of subjects the operation scene was interpreted as a "painting."

Card 8: (TAT 9GF)

Description: A young woman with a magazine and a purse in her hand looks from behind a tree at another young woman in a party dress running along a beach.

Common Themes: This card has a tendency to evoke jealousy themes in girls. The thematic classification is given below:

Central Theme	School A	School B
jealousy/envy	4	4
secrecy	1	1
crime/suspicion	8	2
run away from home	2	0
stranded on Island	0	1
other	4	4
unelaborated ¹	1 45%	10 45%

¹Most of these took the form of a comment that the girl was "running away" from something (unspecified what).

Card 9: (TAT, 14)

Description: The silhouette of a man against a black window. The rest of the picture is totally black.

Common Themes: This card, as is apparent from the table below, elicited a wide variety of themes. It is difficult to detect significant trends, but there is some indication of greater pre-occupation with themes perhaps indicative of personal unhappiness and maladjustment on the part of School B pupils.

Central Theme	School A	School B
murder	2	2
robbery	3	3
suicide	2	3
guilt, remorse	2	2
imprisonment	4	1
escape	9	2
capture	1	1
fear, anxiety	0	1

Central Theme	School A	School B
loneliness, grief, disappointment	1	4
other themes	7	4
unelaborated	1	4

APPENDIX 2

The Sentence Completion Test

Item	Stem	Scoring Code
1	I like . . .	(0) animals and young children; (1) sports and outdoor; (2) school and academic; (3) friends and people; (4) sexual connotation; (5) art, music, drama; (6) clothes, other consumer items; (7) food; (8) other and non-classifiable responses
2.	All school-children are . . .	(0) positively toned; (1) neutral; (2) negatively toned
3.	I am best when . . .	(0) in a good mood; (1) in school; (2) with a friend or in company; (3) active, sporting, outdoors; (4) other
4.	This school . . .	(0) positive; (1) neutral (2) negative
5.	I would like to be . . .	(0) professional occupation; (1) sports hero; (2) non-professional occupation; (3) non-occupational
6.	The kind of kid I don't like . . .	(0) the show-off, exhibitionist, braggart; (1) the tough, fighter, greaser, anti-social type; (2) the fems, sissy, goody-goody, wierd type; (3) the mean, selfish, greedy, immoral type; (4) the snob, conceited, stuck-up, brainy, smart; (5) other or unclassifiable due to conflicting types mentioned
7.	Most teachers . . .	(0) positive; (1) neutral or no response; (2) negative.

Item	Stem	Scoring Code
8.	I am very . . .	(0) positive; (1) neutral or no response; (2) negative
11.	The trouble with school . . .	(0) teachers; (1) work and the amount of time spent on it; (2) plant and equip- ment; (3) school rules; (4) other
12.	Teachers here think of me . . .	(0) positive; (1) neutral or no response; (2) negative
13.	Reading. . .	(0) positive; (1) neutral or no response; (2) negative
14.	In the lower grades . . .	1--Unscored--1
15.	The laws we have . . .	(0) positive; (1) neutral or no response; (2) negative
16.	School tests . . .	(0) positive; (1) neutral or no response; (2) negative
17.	The sort of kid I would want to be friends with . . .	(0) cerebral type: smart, intelligent, mature, thoughtful, serious, good in school; (1) sympathetic type: congruity of inter- ests, loyal, true friend, unselfish, kind; (2) troublemaker: cheeky, daring; (3) sporting, outdoor type (4) social type: good personality, popular, "neat," "groovy" (5) mixed or unclassifiable
18.	Work . . .	(0) positive; (1) neutral or no response; (2) negative
19.	Kids who are brainy . . .	(0) positive; (1) neutral or no response; (2) negative
20.	In class I . . .	(0) work, do my best; (1) daydream, some- times talk; (2) fool around
21.	Leaving school . . .	(0) positive; (1) neutral or no response; (2) negative

Item	Stem	Scoring Code
22.	I hate . . .	(0) teachers; (1) other response
23.	Lessons. . .	(0) positive; (1) neutral or no response; (2) negative
24.	Sometimes I think I'm . . .	(0) positive; (1) neutral or no response; (2) negative
25.	Fighting . . .	(0) positive; (1) neutral or no response; (2) negative

APPENDIX 3

Group Battery and Instructions for Administration

Tests in the group battery were administered consecutively in the following order:

1. The Sociometric Scale
2. The Sentence Completion Test
3. The Anxiety scale from the H.S.P.Q.

Essential instructions were printed on the test booklet. The whole class worked on a given test at the same time to facilitate administration.

The tests:

The Sociometric Scale

YOUR NAME CLASS

Three persons who you get around with:

THEIR NAMES CLASS

. CLASS

. CLASS

The person who you would most like for a friend:

NAME: CLASS

The person who you would least like for a friend:

NAME: CLASS

The Sentence Completion Test (S-C-T): (see Appendix 2)

The Anxiety Scale: (see manual for H.S.P.Q., 1962 ed.)

Instructions for tests: 1. The Sociometric Scale:
"First of all put your name and class at the top of the first page. [pause] Next I'd like you to put down the names of three people who you get around with, three of

of your friends. Some of you may get around with more than three people. If so put down the first three names that come to mind. If you just have one or two particular friends then put down their names. You don't have to put down three names. [pause] The next one asks for the person you would most like for a friend. It does not matter if the person whose name you put down isn't actually one of your friends. It just asks for the name of a person you would most like for a friend. [pause] Now in a school this size not everybody likes everyone equally. In fact there are probably one or two people who you don't like at all. This question asks for the name of the person who you would least like for a friend. If you can't think of anybody for this question then you can just leave it blank."

2. The Sentence Completion

Test: "This is a list of incomplete sentences. The idea is to read the first few words and make up a sentence by completing it with your own words [demonstrates]. Just put down the first sentence which comes to mind. It does not have to be a long sentence, one or two words will do, nor a particularly good one. We're not worried about your spelling or grammar. Work quickly and put down the first thing that comes to mind."

3. The Anxiety Scale:

Instructions given in the H.S.P.Q. manual were used.

APPENDIX 4

Sociometric Data and Teacher Ratings

Teacher Ratings: for each class in each school, teachers were asked to name (a) the pupils who were easiest to teach; (b) those who were most enjoyable to teach; (c) the most mature; (d) the disrupters, those who gave most trouble in class; (d) and (b) were synonymous for many teachers. A combination of (a), (b) and (c) provided an index of teacher esteem and (d) gave insight into who the rebellious pupils were. Eight teachers were interviewed from School B. Only three were formally interviewed from School A, so the ratings here are a good deal less reliable.

Sociometric Data: What follows is a class by class descriptive analysis of teacher and sociometric ratings for the two schools:

School A, Class 1: The three most popular boys, 44, 42 and 48 respectively, form the only clique discernable amongst the boys. 42 receives a teacher rating as a disruptive element. 48 is rated by teachers as a leader. The boy most highly rated by teachers--52, has a mutually reinforced link with 48, the most popular. 49, the pupil most often rated "disruptive" has a mutually reciprocated link with another disrupter, 46. Both send links to 91 (unreciprocated in the case of 46, reciprocated for 49), possibly the boy with highest peer prestige in Grade 7. There are two major formations amongst the girls. The first is a closely knit clique of 41, 39, 10, and 37. None of the clique obtain teacher ratings except for 10, a disruptive element. Of the five girls with favourable teacher ratings, four belong to the second, more extensive clique.

School A, Class 2: There are no recognizable cliques amongst the boys. 91 and 100 the highest peer rated boys are unrated by teachers. 103 and 94, the highest rated boys rate moderately with their peers, as does 99, the boy most frequently mentioned as a "disrupter" by teachers. Of the two most negatively rated by peers, one is also negatively rated by teachers. The girls are divided into two major but overlapping cliques. Each clique has one "disrupter." Of those rated "most mature" by teachers, one is an isolate and another is highly peer rated.

School A, Class 3: The boys are characterized by loose sociometric organization. There are two minimal cliques, dominated by four boys, three of which are rated by teachers as "disrupters." The girls show closer sociometric organization. The pattern of teacher ratings of members of this clique is inconsistent. One member is rated by teachers as moderately disruptive and somewhat of a leader. A peripheral member to this clique is rated "most mature" by one teacher. Neither of the two least popular with peers are positively or negatively rated by teachers.

School B, Class 1: None of the six students mentioned as "more mature" by teachers received high sociometric ratings. The four girls rated highly by teachers form one of the three recognizable friendship cliques amongst the girls. None of the three girls in the most prestigious clique received ratings, from teachers. Of the five mentioned as "disrupters" by teachers, one received a moderately high rating from the boys. 85, 84, 21, the most popular boys form a friendship clique, linked through 84 to 86 with the most popular friendship clique amongst the girls. Like the popular girls friendship clique, that of the boys is viewed neither positively nor negatively by teachers. 27 the only pupil consistently rated "most mature" by teachers is something of an isolate in this class.

School B, Class 2: There is only one recognizable clique amongst the girls (a fairly closely knit one) of which 3 and 32 are members, and the only girls rated "most mature" by two or more teachers. Although this clique contains three of the four most popular girls in the class, it does not have strong outside drawing power. Of the boys, only 47 receives positive ratings on teachability and maturity by more than one teacher. He does not feature amongst the three most popular boys, who form a recognizable friendship clique which is not significantly rated by teachers. 30 is negatively rated by teachers and pupils.

School B, Class 3: 77, the most unpopular pupil in the class (also unpopular with other Grade 7's) is strongly negatively rated by teachers too. 73, most highly rated by teachers, has a mutually reciprocated link with 80, the next most highly rated pupil in the class, but has no links from other sources. 80 receives two unreciprocated links from 70 and 76, a mutually reciprocating pair of no particular status in the class. 72 the most highly peer rated boy is unrated by teachers. 57, the most highly peer rated girl, is considered a "disruptive element" by four teachers. Of the four consistently negatively teacher rated pupils in this class, one is highly unpopular with peers, one is definitely popular and the other two are of no particular standing.

APPENDIX 5

The Syntactic Complexity Scale

The score for this scale is a weighted sum of several sub scales, given below. Ten sentences were selected from each protocol, starting with stories for card 3, a card that tended to elicit stereotyped content. The basic analytic unit to which most of the scales apply, is the sentence. Records could in most cases be easily cut into sentence units. Where unwieldy constructions were formed that had been produced by stringing statements with the connective "and," cuts were made at what seemed to be the most natural boundaries.

The subscales and their weightings:

Scale	Definition	Weighting
(1) Stereotyped Introductions	Sentences that begin with a highly stereotyped formulation. Exhaustively defined by the following: "Looks like . . ." "So . . ." "Maybe . . ." "There's this boy/girl . . ." :Then . . ."	mult. total by -1
(2) Unusual or Complex Introductory Forms	Sentences with a distinctive introductory phrase usually in the form of an adverb, adjective, adverbial or adjectival clause or phrase: e.g.: "When everybodies gone . . ." "Hesitantly he stood up . . ."	mult. total by +1
(3) Complex Verb Form	infrequently scored. e.g.: "he could not help but be . . ."	mult. total by +1
(4) Connective Complexity	three or more different connectives per sentence: e.g.: "but . . . so . . . and . . ."	mult. total by +2
(5) Embeddings	Grammatically acceptable embedded clauses or phrases--usually adjectival e.g.: "now, when he has to recite in class, he knows . . ."	mult. total by +1

Scale	Definition	Weighting
(6) Omissions	Omissions and incomplete sentences. This was scored conservatively because of possible transcription errors.	mult. total by -2
(7) Clumsy expression	e.g.: "discussing the wrong of what he did"	mult. total by -1
(8) Structural Monotony	Refers to the passage as a whole and the use of repititious forms e.g.: "Maybe . . . or . . . Maybe . . . or . . . Only scored if the form occurred <u>more than twice</u> . Also care had to be taken not to score for (1) when scoring scale (T)	Only scored once per protocol. Scored -3
(9) Structural Simplicity	Scored where ≥ 8 of the 10. Sentences were of the simple declarative type	Only scored once per protocol. scored -3

Raw Score Distribution for S.C. Scale

An independent scorer, a graduate student, was instructed by E using the randomly selected protocols until substantial scoring agreement was reached. He then independently scored another randomly selected sample of ten protoc

Inter scorer reliability: $\rho = .78$

Intra scorer reliability (6 weeks interlude): $\rho = .91$

APPENDIX 6

Table of intercorrelations of items on the Sentence - Completion Test. The coefficient of contingency was used. ++ indicates an association where $p \leq .01$
+ indicates an association where $p \leq .05$

	Item No														
	2	4	7	8	10	12	13	15	18	19	20	21	23	24	25
2															
4															
7	++	+													
8															
10		+													
12															
13						++									
15			+		++		+								
18		+	+												
19		++	+		++										
20			++		+	++			+						
21			+						++						
23					++										
24				++								+			
25		++					++								

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